1924

FISHERY INDUSTRIES OF THE UNITED STATES 1924

By OSCAR E. SETTE

DEPARTMENT OF COMMERCE

Bureau of Fisheries Document No. 997

DEPARTMENT OF COMMERCE
BUREAU OF FISHERIES
HENRY O'MALLEY, Commissioner

FISHERY INDUSTRIES OF THE UNITED STATES 1924

By OSCAR E. SETTE
Assistant in Charge, Division of Fishery Industries

APPENDIX VII TO THE REPORT OF THE U. S. COMMISSIONER OF FISHERIES FOR 1925

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By Oscar E. Sette
Assistant in Charge, Division of Fishery Industries

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[1] Appendix VII to the Report of the United States Commissioner of Fisheries for 1925. B. F. Doc. 997.

INTRODUCTION

During 1924 the fishery industries appear to have reached the end of their period of recovery from the postwar depression, which was so severely felt during 1919 and to a lesser extent in subsequent years. In general, the production of fish and fishery products was greater in volume than during the previous year, but the prices which they commanded were somewhat lower.

According to statistics collected on various geographical sections during the past five years over 190,000 persons are engaged in the fisheries and related industries, about $200,000,000 is invested, and the annual yield by fishermen is about 2,600,000,000 pounds of fish, shellfish, and other aquatic products, for which the fishermen receive about $90,000,000. The output of canned fishery products in 1924 was valued at $72,000,000, and the yield of by-products exceeded $10,000,000 in value.

SUMMARY OF OPERATIONS

The technological work of the division during 1924 included a continuation of experiments in the canning of sardines in California and Maine; continuation of investigations relative to the use of copper oleate as a net preservative, with particular reference to preservative action and comparative costs in actual commercial operation; investigation of the utilization of wastes in the fishery industries; and analyses of canned, salted, and smoked fish and shellfish to determine their iodine content. These investigations are fully discussed in following pages.

The statistical work included the collection and monthly publication of statistics of the landings of fish by vessels at the ports of Boston and Gloucester, Mass.; Portland, Me.; and Seattle, Wash., with publication of annual bulletins summarizing these landings for the year; monthly publication of statistics on the cold-storage holdings of fish, which are collected by the Bureau of Agricultural Economics, Department of Agriculture; collection of the statistics on quarterly production, consumption, and holdings of oils in the fishery industries for use of the Bureau of the Census; collection of the statistics on the production of canned fishery products and by-products of the United States and Alaska for the year 1924; compilation and publication of the statistics of the fisheries of the Mississippi River and tributaries and the Great Lakes; compilation of statistics of the fisheries of the Pacific coast in 1922; and collection of statistics on the fisheries of the South Atlantic and Gulf States for 1923.

Including those published in this report, the most recent detailed statistics available for each of the various geographical sections are as follows: New England States, 1919; New York, New Jersey, and Delaware, 1921; Maryland and Virginia, 1920; South Atlantic States, 1923; Gulf States, 1918; Pacific Coast States, 1922 and 1923; Mississippi River and tributaries, 1922; and Great Lakes, 1922.

In order to make results of statistical canvasses and technological research available to those interested, 16,000 copies of statistical bulletins on 42 subjects were distributed to interested persons, and over 1,600 letters were written in reply to specific requests for statistical, technological, and trade information.

In response to urgent requests from men in the crab industry, a special investigation to determine the cause for the present serious condition of this industry was begun during the latter part of 1924 and is being continued.

PUBLICATIONS OF THE DIVISION

During the calendar year 1923 the following publications, prepared in this division, were issued. This list does not include the monthly statistical bulletins for Boston and Gloucester, Mass.; Portland, Me.; and Seattle, Wash., nor the monthly publication of the cold-storage holdings of frozen fish.

DOCUMENTS

Iodine content of sea foods; by Donald K. Tressler and Arthur W. Wells, 8°, 12 pp. Document No. 967.

Fishery industries of the United States, 1923; by Oscar E. Sette, 8°, 219 pp. Document No. 976.

STATISTICAL BULLETINS

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Seattle, Wash., by American fishing vessels during the calendar year 1923. Statistical Bulletin No. 598.

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1923. Statistical Bulletin No. 599.

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1923. Statistical Bulletin No. 600.

Fisheries of the Mississippi River and tributaries, 1922. Statistical Bulletin No. 607.

Canned fishery products and by-products of the United States and Alaska, 1923. Statistical Bulletin No. 608.

Fisheries of the Great Lakes, Lake of the Woods, and Rainey Lake, 1922. Statistical Bulletin No. 618.

Fisheries of Alaska, 1923. Statistical Bulletin No. 625.

TECHNOLOGICAL INVESTIGATIONS

The bureau is giving attention to such technological research as limited funds and personnel permit. Its policy is to select broad, fundamental studies which are urgent, which promise to be of greatest value to the largest number, and which the fisheries industries themselves are least capable of undertaking. These industries offer excellent opportunities for the application of science, and a large amount of research in this field must be conducted before they can be placed on the same plane of efficiency as similar industries in other fields. Few realize, especially in the fisheries industries, the advancements which can be brought about by means of well-directed, adequately supported, technological investigations, and it is important that the bureau demonstrate the possibilities of such research. Rapid progress of the fisheries industries depends largely upon work of this nature combined with the application of sound business principles.

CANNING SARDINES

Sardine canning is an important part of the fishery industries. In 1924 over 3,250,000 cases were packed, having a value in excess of $12,500,000. These figures place this industry next to that of salmon canning in importance and, excluding Alaska salmon, first among our canned fishery products. This industry, too, can be greatly expanded, there being large supplies of herring, pilchards, and like fishes which can be utilized. In time, undoubtedly, this expansion will take place, due to the increasing world demand for cheap food of high protein content.

Our canned sardines, meet very keen competition at home and abroad, however, and if we are to capture and hold our share of the world markets our products must be high in quality as well as low in price. Since 1920 the bureau has been conducting research upon the preparation of fish for canning as sardines, making available lacking fundamental scientific information upon this important subject and working toward the development of a better and cheaper method of preparing the fish. Considerable success is being attained along these lines.

In the last report mention was made of the development and successful operation on small and semicommercial scales of a new process of preparing fish for canning as sardines. This method was developed in the bureau's experimental laboratory at San Pedro, Calif. Since then experiments have been carried out in Maine, ending in the successful application of the same process to the preparation of Maine sardines.

The new process depends on rapidly moving hot air to cook and dry the fish at the same time, followed, if desired, by a period of cooling in a blast of cold air so that they may be packed immediately. An additional development was brought forward by the Maine experiments—while simultaneously drying and cooking small fish they can also be given a light smoking by the simple and inexpensive procedure of adding smoke to the drying air.

It is firmly believed that no other method of preparing fish for canning as sardines offers equal possibilities for lowering the production costs and improving the products made from both small and large fish in California and Maine. The packs put up by the new process from California fish are, in the long run, better than similar products which have been fried in oil. The same is true with regard to packs produced by the new method as compared with goods prepared from steamed and fried fish in Maine.

Tests extensive enough to prove the above claims have been carried out. It remains to be shown, however, how well the process will work out on a commercial scale. For this purpose a commercial-sized installation of relatively expensive equipment, different from any now being used, is required. Engineering companies will design and construct equipment and make guaranties both upon the equipment itself and the cost of operation. These guaranties in effect assure successful operation, but even with these assurances there is reluctance upon the part of the canners to scrap old equipment and purchase new until there is positive proof that the venture will be successful both from the technical and business standpoints. It is becoming evident that some plan for bringing about development

of the process on a large scale must be formulated which will eliminate most of the risk to the canners. This phase of the problem is now receiving consideration.

UTILIZATION OF BY-PRODUCTS

Considerable progress has been made in the last few years in the utilization of the large quantities of waste fish and offal from fish markets and concerns manufacturing preserved products. Oil can be extracted from most fish waste and the residue made into fish meal. These products are very valuable. The oil is used in making soaps, paints, in tanning leather, and for many other purposes, and the meal serves as a stock and poultry food and as a fertilizer. Although considerable has been accomplished in eliminating waste, much yet remains to be done. Less than half the supply of waste products of the fisheries is now being utilized, and present practices of manufacturing fish meal and oil, both from offal and from non-edible fish, are in general quite inefficient. There are also possibilities for producing better and more valuable products. The bureau is especially interested in these problems, as any improvement which can be brought, either through education or by research, increases the prosperity of the fisheries industries and contributes to national economy.

Some phases of this problem are of particular importance at this time. Ways should be developed of either eliminating the press liquors or of economically recovering and utilizing the protein matter which is present in these liquors and now discarded. This material is not only a large waste but it seriously pollutes our coastal waters in some places. There is need for small, inexpensive plants to handle small quantities of offal, such as collect in many places, and for equipment to handle profitably large quantities of material for a period of 4 to 6 weeks of each year. At present it only pays to handle relatively large amounts of fish or offal where operation can be continuous over a good part of the year. Research is now being conducted along these lines.

PRESERVATION OF NETS

Many very good reports are being received concerning the use of copper oleate as a net preservative. It is proving particularly effective on pound nets, especially in combination with copper paint. On the coasts of Long Island and New Jersey tarred netting ordinarily lasts but two season and has to be taken from the water about twice a month during part of the season in order that hydroids, barnacles, and other growths may be removed. Where the copper oleate-copper paint mixture is used it is only necessary to remove the netting for treatment about every two months, there being no growth. Under such conditions with the twine in a pound net costing around $4,000 for each net it is proving very profitable to use this mixture.

Unfavorable reports also are received, and in many cases fishermen who started to use copper oleate have gone back to old methods of preserving their twine. Copper oleate may be applied improperly or used for a purpose for which it was not intended, and cases of dis-

satisfaction are frequently traced to these causes. Copper oleate, however, has proved to be an excellent preservative and antifouling agent for fish nets wherever used properly. Usually a fisherman considers only the first cost and does not consider whether it might not be much cheaper in the long run to frequently treat his nets with copper oleate rather than to buy new netting.

The full value of cooper oleate as a net preservative can not be determined until accurate data are available upon the costs of treating netting with different preservatives, including copper oleate, and the length of life of the twine so treated. Practical tests of this nature have been arranged in cooperation with fishermen at several points on the Atlantic seaboard and on the Great Lakes. These tests will also show the advantages and disadvantages of using copper oleate under practical conditions and indicate what modifications in its use are necessary for different kinds of gear under the widely varying conditions to which they are subjected.

Cordage manufacturers are finding copper oleate to be a good preservative and antifouling agent for manila rope. At least one company now sells for marine use a line of rope treated with this material.

IODINE CONTENT OF PRESERVED SEA FOODS

In a paper published during 1924 (Bureau of Fisheries Document No. 967) it was shown that fresh sea foods contain a higher percentage of iodine than other common foods. It was pointed out that since goiter and other thyroid disorders are caused by a lack of iodine being ingested, the liberal use of sea foods in the diet should be an effective preventive of these disorders, especially in so-called goiterous belts where the iodine content of the water and foods is below normal. The amount of iodine necessary to prevent goiter is very small—only about one part in 3,000,000 parts of the body weight—but it is important that this balance be maintained.

Many of these goiterous belts are so located that it is rather difficult for the inhabitants to obtain marine fish in the fresh condition. Much of the marine fish which they consume has been preserved in some manner, such as canning, salting, and smoking. The question naturally arises as to whether these preserved products contain iodine in quantities comparable to that in fresh fish. A series of analyses was made which indicates that such products do contain comparable quantities of iodine. The results of these analyses were published in Bureau of Fisheries Document No. 979.

CRAB FISHERY OF CHESAPEAKE BAY

Due to the alarming decline in the crab production of Chesapeake Bay, particularly along the eastern shore, the bureau was strongly urged to investigate this industry. Very little information was available upon which to base a determination of the character or reasons for the decline, and it was therefore first necessary to make a statistical survey in which particular attention was directed to the discovery of such statistics on catches during previous years as could be found in the records of crab houses. An analysis of such statistics as were found indicated that the decline in abundance of crabs took place well in advance of a decline in total catch. The total catch did not decline seriously until sometime between 1915 and 1920,

whereas the catch per boat began its most serious decline in 1909, and the total catch has since been maintained by vastly greater fishing effort. Apparently in recent years the scarcity of crabs has been so pronounced that high prices and greater fishing effort have not been productive of a yield sufficient to meet present demands. All available data point to the fact that the depletion is due to overfishing and not to natural causes.

A feature of the soft-crab industry which came to light upon examining the records of crab houses was the excessive losses in converting peeler crabs into soft crabs. Among 10 firms whose records were made available there was a loss of 30 to 70 per cent in the shedder floats during the year. The average loss was over 50 per cent. This was due almost exclusively to the practice of taking crabs long before they were in the true peeler stage and attempting to hold them for extended periods of time in the hope that they would shed and become soft crabs.

There are well-defined differences which take place in the external appearance of the crab as it approaches shedding time and these are well known to fishermen. Two firms which accepted only crabs in the advances peeler stage sustained shedding losses averaging only 15 per cent. It was recommended that steps be taken to avoid these losses, and, with active interest of administrating officials of both States in this matter, it is believed that the evil will be rectified.

Although this may bring about an improvement of conditions in the crab industry, it will be necessary to employ more drastic measures to bring about a satisfactory recovery of the fishery. Surveys are now under way to determine the relationship of the Virginia and Maryland fisheries to the depletion of the general stock of crabs and the probable effect of restrictive measures.

TRAWL-NET FISHERY OF CHESAPEAKE BAY AND TRIBUTARIES

During the winter of 1924–25 trawl-net fishermen were reported to be operating in the Patuxent River and Chesapeake Bay with a new and destructive type of gear. At the urgent invitation of the Conservation Department of Maryland the writer was detailed to cooperate in observing this fishery and investigating its destructiveness.

It was found that the net operated was essentially a small otter trawl, fished in the deeper waters of this region in the wintertime when the white perch (*Morone americana*) and striped bass (*Roccus lineatus*) were concentrated in the deeper "holes" and could be caught by this gear in unusually large quantities.

Actual counts of fish taken by this gear showed that 20 to 55 per cent of white perch and 25 to 50 per cent of the striped bass were under the size which was legal in the State of Maryland, and observations indicated that these undersized fish when returned to the water did not survive.

The conclusions drawn from the investigation were:

1. This fishery catches from 20 to 55 per cent of small, unmarketable fish, few of which can survive.
2. This fishery can destroy large quantities of brood stock necessary to perpetuate the species.

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3. A continuation of the fishery might seriously deplete the white perch and striped bass of the Patuxent River and Chesapeake Bay or of any waters where similar conditions obtain.

It was therefore recommended that the Conservation Department of Maryland prohibit this fishery, and subsequent advices received from the department indicate that it has been entirely stopped.

CANNED FISHERY PRODUCTS AND BY-PRODUCTS OF THE UNITED STATES AND ALASKA, 1924

The fish-canning and by-products industries of the United States and Alaska attained a production in 1924 valued at $82,473,579, of which canned goods amounted to $72,164,589 and by-products to $10,308,990. This is a decrease of 0.4 per cent in the value of canned products and of 18.4 per cent in the value of by-products as compared with 1923. Named in order of value, the most important canned products in 1924 were salmon, sardines, tuna, shrimp, and oysters. Of the by-products, fish oils, fish scrap and meal, and crushed oyster shells were most important.

CANNED FISHERY PRODUCTS

SALMON

In 1924 there were 186 plants engaged in canning salmon in the Pacific Coast States and Alaska as compared with 188 in the previous year. Of the total in 1924, 130 were operated in Alaska, 32 in Washington, 22 in Oregon, and 2 in California. The pack of canned salmon, on the basis of forty-eight 1-pound cans to the case, amounted to 6,253,577 cases, valued at $42,401,602, as compared with 6,402,906 cases, valued at $45,533,573, in 1923, a decrease of 2.3 per cent in quantity and 6.9 per cent in value.

In the Pacific Coast States the pack amounted to 958,662 cases, valued at $9,394,467, as follows: Chinook, 349,014 cases, valued at $4,599,759; sockeye, 85,800 cases, valued at $1,478,698; coho or silver, 231,139 cases, valued at $1,774,078; humpback or pink, 12,778 cases, valued at $79,436; chum, 247,858 cases, valued at $1,192,156; steelhead, 32,073 cases, valued at $270,340; and other salmon products valued at $122,228. Of the total canned salmon in the Pacific Coast States Washington produced 541,962 cases, valued at $5,062,082, and Oregon and California together 416,700 cases, valued at $4,332,385.

In Alaska the pack amounted to 5,294,915 cases, valued at $33,007,135, divided as follows: Chinook, 33,648 cases, valued at $299,009; red or sockeye, 1,447,895 cases, valued at $13,803,932; coho or silver, 183,601 cases, valued at $1,254,551; humpback or pink, 2,601,283 cases, valued at $12,837,346; and chum or keta, 1,028,488 cases, valued at $4,812,297. Of the total 2,787,789 cases, valued at $14,711,842, were packed in the southeastern district; 1,605,107 cases, valued at $10,067,602, in the central district; and 902,019 cases, valued at $8,227,691, in the western district.

Compared with 1923, there was a decrease of three plants in Washington and an increase of one each in Oregon, Alaska, and California. The pack in the Pacific Coast States decreased 29.9 per cent in quantity and 25.8 per cent in value. Most of the decrease was due to the very small pack of humpbacks, although the packs of chinooks,

sockeyes, and silvers also decreased. The pack of chums was larger than in 1923 and the pack of steelheads about the same. In Alaska the pack increased 5.2 per cent in quantity and 0.4 per cent in value. The increase of the Alaska pack was due almost entirely to the unusually large pack of humpbacks in the central district, although the pack of cohos was also larger than in 1923. A distinct decrease of nearly 50 per cent occurred in the pack of chums. The packs of kings or chinooks and reds or sockeyes also decreased.

Pack of canned salmon, 1924

Products	Pacific Coast States						Alaska	
	Washington		Oregon and California		Total		Southeast	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
King, chinook, or spring:								
1-pound tall	17,613	$102,160	11,173	$89,374	28,786	$191,534	2,566	$18,555
1-pound flat	36,161	477,056	95,865	1,184,459	132,026	1,661,515	4,721	44,622
1-pound oval	2,355	47,100	4,554	89,140	6,909	136,240	----	----
½-pound flat	78,111	1,089,469	102,578	1,508,921	180,689	2,598,390	995	11,516
½-pound oval	360	7,200	244	4,880	604	12,080	----	----
Total	134,600	1,722,985	214,414	2,876,774	349,014	4,599,759	8,282	74,693
Red or sockeye:								
1-pound tall	211	2,954	----	----	211	2,954	140,989	1,291,148
1-pound flat	16,215	227,012	----	----	16,215	227,012	39,717	415,789
½-pound flat	64,160	1,154,880	5,214	93,852	69,374	1,248,732	11,801	156,738
Total	80,586	1,384,846	5,214	93,852	85,800	1,478,698	192,507	1,863,675
Coho or silver:								
1-pound tall	55,769	392,539	49,332	345,324	105,101	737,863	100,016	667,530
1-pound flat	38,221	290,481	40,546	305,841	78,767	596,322	5,034	45,367
½-pound flat	23,734	223,354	23,537	216,539	47,271	439,893	4,939	50,649
Total	117,724	906,374	113,415	867,704	231,139	1,774,078	109,989	763,546
Humpback or pink:								
1-pound tall	2,841	14,205	2,438	12,190	5,279	26,395	1,647,157	8,079,281
1-pound flat	----	----	776	4,190	776	4,190	8,932	51,796
½-pound flat	5,964	43,386	759	5,465	6,723	48,851	21,365	151,507
Total	8,805	57,591	3,973	21,845	12,778	79,436	1,677,454	8,282,584
Chum or keta:								
1-pound tall	173,812	794,534	42,478	195,399	216,290	989,933	798,581	3,722,311
1-pound flat	----	----	1,353	6,494	1,353	6,494	630	2,819
½-pound flat	15,184	103,492	15,031	92,237	30,215	195,729	346	2,214
Total	188,996	898,026	58,862	294,130	247,858	1,192,156	799,557	3,727,344
Steelhead:								
1-pound tall	3,262	20,878	196	1,254	3,458	22,132	----	----
1-pound flat	2,961	20,727	8,926	61,880	11,887	82,607	----	----
½-pound flat and oval	5,028	50,655	11,700	114,946	16,728	165,601	----	----
Total	11,251	92,260	20,822	178,080	32,073	270,340	----	----
Grand total	541,962	5,062,082	416,700	4,332,385	958,662	9,394,467	2,787,789	14,711,842

Pack of canned salmon, 1924—Continued

Products	Alaska—Continued						Grand total	
	Central		Western		Total			
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
King, chinook, or spring:								
1-pound tall	5,246	$44,871	14,835	$119,298	22,647	$182,724	51,433	$374,258
1-pound flat	4,779	54,475			9,500	99,097	141,526	1,760,612
1-pound oval							6,909	136,240
½-pound flat	506	5,672			1,501	17,188	182,190	2,615,578
½-pound oval							604	12,080
Total	10,531	105,018	14,835	119,298	33,648	299,009	382,662	4,898,768
Red or sockeye:								
1-pound tall	361,021	3,339,510	803,586	7,638,051	1,305,596	12,268,709	1,305,807	12,271,663
1-pound flat	63,201	633,365	7,434	70,794	110,352	1,119,948	126,567	1,346,960
½-pound flat	15,827	200,801	4,319	57,736	31,947	415,275	101,321	1,664,007
Total	440,049	4,173,676	815,339	7,766,581	1,447,895	13,803,932	1,533,695	15,282,630
Coho or silver:								
1-pound tall	65,691	433,070	4,432	26,909	170,139	1,127,509	275,240	1,865,372
1-pound flat	369	2,462			5,403	47,829	84,170	644,151
½-pound flat	3,120	28,564			8,059	79,213	55,330	519,106
Total	69,180	464,096	4,432	26,909	183,601	1,254,551	414,740	3,028,629
Humpback or pink:								
1-pound tall	888,250	4,390,431	31,416	142,205	2,566,823	12,611,917	2,572,102	12,638,312
1-pound flat	4,163	22,126			13,095	73,922	13,871	78,112
½-pound flat					21,365	151,507	28,088	200,358
Total	892,413	4,412,557	31,416	142,205	2,601,283	12,837,346	2,614,061	12,916,782
Chum or keta:								
1-pound tall	192,934	912,255	35,997	172,698	1,027,512	4,807,264	1,243,802	5,797,197
1-pound flat					630	2,819	1,983	9,313
½-pound flat					346	2,214	30,561	197,943
Total	192,934	912,255	35,997	172,698	1,028,488	4,812,297	1,276,346	6,004,453
Steelhead:								
1-pound tall							3,458	22,132
1-pound flat							11,887	82,607
½-pound flat and oval							16,728	165,601
Total							32,073	270,340
Grand total	1,605,107	10,067,602	902,019	8,227,691	5,294,915	33,007,135	6,253,577	42,401,602

NOTE.—The pack of salmon has been reduced to the equivalent of forty-eight 1-pound cans to the case. There were other salmon products, valued at $125,174, not shown in the above table.

SARDINES

In 1924 there were 28 plants canning sardines in Maine, 1 in Massachusetts, and 24 in California. This is a decrease of one plant in Maine and an increase of two plants in California, as compared with 1923. The total pack in Maine, Massachusetts, and California was valued at $12,636,599, as compared to $9,896,796 in 1923, an increase of 28 per cent.

In Maine and Massachusetts there were produced 1,819,868 cases of various sizes, which are equivalent to 1,899,925 standard cases of 100 quarter-pound tins, valued at $7,191,026, as compared with 1,272,277 standard cases, valued at $5,288,865, in the previous year, an increase of 49.3 per cent in quantity and 36.0 per cent in value. The average price per standard case was $3.78 in 1924, as compared to $4.16 in 1923.

In California there were produced 1,407,731 cases of various sizes, which are equivalent to 1,367,139 standard cases of forty-eight 1-pound tins, valued at $5,445,573, as compared with 1,100,162

standard cases, valued at $4,607,931 in 1923, an increase of 24.3 per cent in quantity and 18.2 per cent in value. The average price per standard case has declined continuously since 1921, the averages being as follows: $5.89 in 1921, $4.70 in 1922, $4.19 in 1923, and $3.98 in 1924.

Pack of canned sardines, 1924

Sardines (herring)	Maine and Massachusetts	
	Cases	*Value*
In olive oil: Quarters (100 cans)	39,012	$247,025
In cottonseed oil: Quarters (100 cans)	[2] 1,464,830	5,664,578
In mustard:		
Quarters (100 cans)	114,296	483,867
Three-quarters (48 cans)	[3] 181,948	707,366
In tomato sauce: Quarters (100 cans)	19,782	88,190
Total	1,819,868	7,191,026

Sardines (pilchard)	California	
	Cases	*Value*
½-pound oval (48 cans) [1]	16,934	$49,349
1-pound oval (48 cans):		
In tomato sauce	1,240,905	4,494,233
In mustard	46,675	173,749
Soused	4,098	15,266
Spiced	5,217	18,623
In other sauces	22,587	89,113
¼-pound square (100 cans) [4]	[5] 67,386	552,536
½-pound square (100 cans) [4]	[6] 3,929	52,704
Total	1,407,731	5,445,573

[1] Largely in tomato sauce.
[2] Includes a few cases of ¾-pound cans, 50 to the case, which have been converted to the basis of ¼-pound cans, 100 to the case.
[3] Includes a few cases of 50 cans each which have been converted to a basis of 48 cans to the case.
[4] Largely in oil.
[5] Includes a few cases packed round, 24 cans each, which have been converted to a basis of 100 cans to the case.
[6] Includes a few cases of 48 cans each, which have been converted to a basis of 100 cans to the case.

SHAD AND ALEWIVES

Shad and shad roe were canned at 7 plants in Washington, 11 in Oregon, and 1 in California. The total pack amounted to 9,686 cases of various sizes, valued at $93,393, as compared to 3,409 cases, valued at $52,483, in 1923. Alewives and alewife roe were packed at 8 plants in Maryland, 22 in Virginia, and 3 in North Carolina. The total pack amounted to 92,142 cases, valued at $337,363, as compared with 43,920 cases, valued at $171,350, in 1923.

Pack of shad and alewives, 1924

Shad	Washington, Oregon, and California	
	Cases	*Value*
½-pound flat and oval (48 cans)	1,774	$3,712
1-pound tall (48 cans)	5,583	16,749
Roe:		
½-pound flat (48 cans)	228	4,104
½-pound oval (48 cans)	2,101	68,828
Total	9,686	93,393

Alewives	Maryland, Virginia, and North Carolina	
	Cases	*Value*
No. 1 and No. 2 (24 cans)	[1] 3,306	$5,118
Roe: No. ½, No. 1, and No. 2 (24 cans)	[1] 88,836	332,245
Total	92,142	337,363

[1] The pack of alewives and alewife roe has been reduced to the equivalent of No. 2, 15-ounce cans, 24 to the case.

TUNA AND TUNALIKE FISHES

In 1924, 19 plants were canning tuna and tunalike fishes. All of them were in California, just as in 1923. The total production amounted to 708,752 cases of various sizes, which were equivalent to 652,416 standard cases of 48 half-pound tins, valued at $5,756,586. This is a decrease of 20.2 per cent in quantity and 16.8 per cent in value, as compared to the pack of the previous year.

The pack of tuna and tunalike fishes includes albacore (put up under the name of "white-meated tuna"), yellowfin and bluefin tuna, striped tuna or skipjack, "tonno," bonito, and skipjack. "Tonno" is prepared from striped tuna and the blue and yellowfin tunas, but mostly from the first named. It consists of a highly seasoned and spiced pack put up in oil after the Italian method. The 1924 pack shows a decided increase of the albacore, of which there was an unusually large run in the southern waters. The pack might have been larger but for a fishermen's strike occurring at the height of the season. The packs of the other tunas were considerably smaller than in 1923, especially that of the yellowfin tuna, which is caught largely in waters off the coast of Mexico. The average price received for all kinds of tuna was $8.80 per standard case, as compared with $8.45 in 1923.

Pack of tuna and tunalike fishes, 1924

Sizes	Albacore		Yellowfin		Bluefin		Tuna, bluefin, and yellowfin	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
¼-pound round (48 cans)	45,773	$274,924	5,234	$21,979	[1] 5,373	$24,683	621	$2,484
½-pound round (48 cans)	292,268	2,804,603	26,307	172,448	13,922	103,442	8,464	59,248
1-pound round (48 cans)	50,833	944,982	2,405	27,846	2,370	29,359	1,043	13,559
Total	388,874	4,024,509	33,944	222,273	21,665	157,484	10,128	75,291

Sizes	Tuna, striped		"Tonno"		Bonito		Yellowtail		Total	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
¼-pound round (48 cans)	[1] 6,219	$23,194	[1] 160,819	$728,016	[1] 15,319	$64,772	-------	-------	239,356	$1,140,052
½-pound round (48 cans)	33,923	188,446	[2] 15,566	120,240	5,239	30,034	[3] 10,365	$52,965	406,054	3,531,426
1-pound round (48 cans)	3,063	27,558	664	13,605	-------	-------	2,964	28,199	63,342	1,085,108
Total	43,205	239,198	177,049	861,861	20,558	94,806	13,329	81,164	708,752	5,756,586

[1] Includes the pack of 100 cans to the case, which has been converted to the equivalent of 48 cans to the case.
[2] Includes the pack of 50 cans to the case, which has been converted to the equivalent of 48 cans to the case.
[3] Includes a few cases of ¼-pound round, which have been converted to a basis of ½-pound round.

SHRIMP AND CRABS

In 1924, 94 canneries were engaged in canning shrimp, 30 of these being in Louisiana, 26 in Mississippi, 12 in Georgia, 9 in Florida, 7 in Alabama, 5 in Texas, 3 in North Carolina, 1 in South Carolina, and 1 in New York. The total pack of shrimp amounted to 752,471 cases of various sizes, which were equivalent to 718,517 standard cases of 48 No. 1 cans, valued at $4,608,950. This is an increase of 2.6 per cent in quantity and 5.2 per cent in value, as compared with the production in 1923.

Crabs were canned at 1 plant in Alaska, 1 in Maine, 1 in Maryland, 2 in Virginia, and 1 in Mississippi, making a total of 6 plants, as compared with 9 in 1923. The total pack amounted to 3,563 cases of various sizes, valued at $35,944. Compared with 1923, when the pack amounted to 4,138 cases of various sizes, valued at $47,023, this is a distinct decrease.

Pack of shrimp and crabs, 1924

Shrimp	Georgia, North Carolina, and South Carolina		Florida		Alabama	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*
No. 1 dry (4 dozen)	20,107	$126,416	2,245	$13,985	26,467	$160,519
No. 1 wet (4 dozen)	61,997	385,748	34,346	223,932	22,167	132,353
No. 1½ dry (2 dozen)	5,311	32,065	1,162	7,437	4,501	28,200
No. 1½ wet (2 dozen)	1,146	7,008	888	5,615	388	2,250
Total	88,561	551,237	38,641	250,969	53,523	323,322

Shrimp	Mississippi		Louisiana and Texas		Total	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*
No. 1 dry (4 dozen)	18,757	$110,906	[1] 236,559	$1,417,661	304,135	$1,829,487
No. 1 wet (4 dozen)	90,638	548,661	132,251	884,131	341,399	2,174,825
No. 1½ dry (2 dozen)	4,704	29,516	22,225	138,993	37,903	236,211
No. 1½ wet (2 dozen)	232	1,406	2,444	15,152	5,098	31,431
Total	114,331	690,489	393,479	2,455,937	[2] 688,535	[2] 4,271,954

Crabs	Alaska, Maine, Maryland, Virginia, and Mississippi	
	Cases	*Value*
7½, 8, 9, and 12 ounce (4 dozen)	[3] 3,004	$29,572
15, 16, and 17 ounce (2 dozen)	[4] 559	6,372
Total	3,563	35,944

[1] Includes a few cases packed 4 ounces to the can, which have been converted to the equivalent of No. 1 5-ounce cans.

[2] In addition to the above there were packed in 5¼, 5¾, 6¼, 14, and 18 ounce glass jars in Florida, Alabama, Mississippi, New York, and Texas, 63,936 cases of shrimp, valued at $336,996, making a total of 752,471 cases, valued at $4,608,950.

[3] The 8, 9, and 12 ounce cans have been converted to the equivalent of 7¼-ounce cans, 4 dozen to the case.

[4] The 16 and 17 ounce cans have been converted to the equivalent of 15-ounce cans, 2 dozen to the case.

CLAMS

The pack of clams of all kinds in 1924 amounted to 389,435 cases of various sizes, valued at $2,161,389. Razor clams were canned at 19 plants in Washington, 4 in Oregon, and 13 in Alaska, the total pack amounting to 113,717 cases of various sizes, valued at $863,684. This is a decrease as compared with the previous year, when 130,389 cases, valued at $883,844, were packed. The decrease occurred entirely in the Pacific Coast States, Alaska's pack being larger than in 1923.

Hard clams were packed at 2 plants in Florida, 1 in Georgia, 1 in Rhode Island, and 4 in Washington. The pack, exclusive of chowders, bouillon, and juices, amounted to 38,544 cases, valued at $271,911. Soft clams were packed in 19 plants in Maine and 2 in Massachusetts, the pack, exclusive of chowders, etc., amounting to 80,561 cases of various sizes, valued at $459,882. The chowders, soups, bouillon, and juices of both hard and soft clams totaled 156,613 cases of various sizes, valued at $565,912.

Pack of clams, 1924

RAZOR CLAMS

Sizes	Washington and Oregon		Alaska		Total	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*
Whole:						
No. 1 (4 dozen) and No. 2 (2 dozen)	1,490	$11,333			1,490	$11,333
1-pound (4 dozen)	1,628	19,686	8,020	$75,315	9,648	95,001
5-pound (½ dozen)			1,200	7,650	1,200	7,650
10-pound (½ dozen)			65	585	65	585
Minced:						
½-pound flat (4 dozen)	12,132	87,064	52,131	354,961	64,263	442,025
No. 1 (4 dozen)	14,210	110,131	21,074	185,456	35,284	295,587
No. 2 (2 dozen)	677	4,231			677	4,231
1-pound (4 dozen)	140	1,269	645	5,172	785	6,441
10-pound (½ dozen)			26	273	26	273
Juice: No. 2 (2 dozen)	279	558			279	558
Total	30,556	234,272	83,161	629,412	113,717	863,684

HARD CLAMS

Sizes	Florida and Washington	
	Cases	*Value*
Whole:		
1-pound (4 dozen)	2,074	$18,043
No. 1 (4 dozen)	11,010	82,458
No. 2 (2 dozen)	14,179	81,267
No. 10 (½ dozen)	2,800	38,071
Minced:		
No. 1 (4 dozen)	[1] 5,402	34,943
No. 2 (2 dozen	[2] 3,079	17,129
Total	38,544	271,911

SOFT CLAMS

Sizes	Rhode Island, Maine, and Massachusetts	
	Cases	*Value*
Whole:		
5-ounce (4 dozen)	[3] 57,991	$294,639
8-ounce (4 dozen)	[4] 17,477	140,804
10-ounce (2 dozen)	5,093	24,439
Total	80,561	459,882

OTHER HARD AND SOFT CLAM PRODUCTS

Sizes	Maine, Florida, Massachusetts, Georgia, Rhode Island, and Washington	
	Cases	*Value*
Chowder and soup:		
No. 1 (2 dozen)	[5] 78,719	$179,711
No. 1½ and No. 2 (2 dozen)	[6] 24,355	89,036
No. 3 (2 dozen)	43,612	239,274
No. 10 (½ dozen)	2,022	10,261
Bouillon and juice: 10-ounce (4 dozen)	[7] 7,905	47,630
Total	156,613	565,912

[1] Includes the pack of ½-pound flat cans which has been converted to a basis of No. 1 cans, 4 dozen to the case.

[2] Includes a few cases of No. 10 cans, ½ dozen to the case, which have been converted to a basis of No. 2 cans, 2 dozen to the case.

[3] Includes a few cases of 4-ounce cans converted to a basis of 5-ounce cans.

[4] Includes the pack of 6, 8, and 8½ ounce cans, 2 dozen to the case, which has been converted to a basis of 8-ounce cans, 4 dozen to the case.

[5] Includes a few cases of No. ½ cans, 2 dozen to the case, which have been converted to a basis of No. 1 cans, 2 dozen to the case.

[6] The pack of No. 2 cans, 2 dozen to the case, has been reduced to the equivalent of No. 1½ cans, 2 dozen to the case.

[7] The pack of clam bouillon and juice has been converted to the equivalent of 10-ounce cans, 4 dozen to the case.

OYSTERS

Oysters were canned at 9 plants in Maryland, 6 in North Carolina, 13 in South Carolina, 6 in Georgia, 6 in Florida, 5 in Alabama, 21 in Mississippi, 6 in Louisiana, and 1 in Texas. The total pack amounted to 460,427 cases of various sizes, which were equivalent in quantity to 447,481 standard cases of forty-eight 5-ounce tins, valued at $2,478,044. This is a decrease of 14.7 per cent in quantity and 8.9 per cent in value, as compared with the previous year. The average price per standard case of oysters has increased constantly since 1922, the figures being $4.79, $5.19, and $5.54 in 1922, 1923, and 1924, respectively.

Pack of oysters, 1924

Sizes	Maryland		North Carolina		South Carolina		Georgia	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
4-ounce (4 dozen)	7,343	$42,441	668	$3,337	[1] 12,855	$61,101		
5-ounce (4 dozen)	40,715	260,370	32,221	167,958	72,387	365,300	12,120	$65,046
6-ounce (4 dozen)	7,684	82,446			104	1,040		
8-ounce (2 dozen)	3,138	17,618			2,195	10,293		
10-ounce (2 dozen)	9,092	57,255	3,968	19,318	16,267	73,095	106	575
12-ounce (2 dozen)	723	7,925						
Total	68,695	468,055	36,857	190,613	103,808	510,829	12,226	65,621

Sizes	Florida		Alabama		Mississippi		Louisiana and Texas		Total	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
4-ounce (4 dozen)					32,035	$155,553			52,901	$262,432
5-ounce (4 dozen)	12,608	$67,163	9,922	$49,896	120,189	632,762	7,585	$44,315	307,747	1,652,810
6-ounce (4 dozen)							2,000	13,600	9,788	97,086
8-ounce (2 dozen)	278	1,251			16,730	81,393			22,341	110,555
10-ounce (2 dozen)	400	2,000	1,500	7,500	35,594	187,493			66,927	347,236
12-ounce (2 dozen)									723	7,925
Total	13,286	70,414	11,422	57,396	204,548	1,057,201	9,585	57,915	460,427	2,478,044

[1] Includes pack of 3-ounce cans converted to the equivalent of 4-ounce cans, 4 dozen to the case.

MISCELLANEOUS CANNED PRODUCTS

During 1924 there were produced miscellaneous canned fishery products, not mentioned above, as follows: In Maine, Massachusetts, New York, New Jersey, Maryland, Virginia, North Carolina, Georgia, Florida, and Oregon, 5,836,164 pounds of canned fish, turtles, and terrapin, valued at $1,083,941, and 956,428 pounds of fish roe, valued at $251,695; and in California 33,294 cases of tuna flakes, abalone, barracuda, mackerel, squid, and "tuniento," valued at $193,909.

Comparative statistics of canned fishery products from 1921 to 1924

Year	Salmon					
	Pacific Coast States		Alaska		Total	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*
1921	1,002,948	$9,234,425	2,596,826	$19,632,744	3,599,774	$28,867,169
1922	733,246	8,633,524	4,501,652	29,787,193	5,234,898	38,420,717
1923	1,367,263	12,660,566	5,035,697	32,873,007	6,402,960	45,533,573
1924	958,662	9,394,467	5,294,915	33,007,135	6,253,577	42,401,602

Comparative statistics of canned fishery products from 1921 to 1924—Continued

Year	Maine sardines		California sardines		Tuna and tunalike fishes	
	Cases	*Value*	*Cases*	*Value*	*Cases*	*Value*
1921	1,399,507	$3,960,916	398,668	$2,346,446	549,150	$3,074,626
1922	1,869,719	5,750,109	715,364	3,361,480	672,321	4,511,873
1923	1,272,277	5,288,865	1,100,162	4,607,931	817,836	6,914,760
1924	1,899,925	7,191,026	1,367,139	5,445,573	652,416	5,756,586

Year	Oysters		Shrimp		Other canned products	Total
	Cases	*Value*	*Cases*	*Value*	*Value*	*Value*
1921	442,086	$2,179,271	655,364	$3,804,781	$2,401,497	$46,634,706
1922	505,973	2,423,616	579,797	3,064,087	2,933,065	60,464,947
1923	524,544	2,720,073	700,429	4,381,534	2,998,469	72,445,205
1924	447,481	2,478,044	718,517	4,608,950	4,282,808	72,164,589

NOTE.—Cases have been converted to a standard basis, as follows: Salmon, forty-eight 1-pound cans; Maine sardines, one hundred ¼-pound cans; California sardines, forty-eight 1-pound cans; tuna and tunalike fishes, forty-eight ½-pound cans; oysters, forty-eight 5-ounce cans; and shrimp, forty-eight No. 1 cans.

EXPORTS OF CANNED FISHERY PRODUCTS IN 1924

Statistics of the quantity of canned fish exported from the United States during the calendar year, collected and compiled by the Bureau of Foreign and Domestic Commerce, are given in the following table:

Domestic exports of canned fish from the United States, by countries, 1924

Countries	Salmon		Sardines		Tuna		Other canned fish	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Austria			192	$55				
Azores and Madeira Islands	332	$55						
Belgium	1,337,489	138,779	997,820	85,530			203,375	$17,467
Czechoslovakia			48	4				
Denmark	9,600	1,488						
France	42,659	7,855	15,930	1,432	48	$10	160	74
Germany	150,167	20,820	7,525	714			14,878	2,091
Gibraltar	1,536	227						
Greece	494,062	57,988	19,370	2,079	250	80	32,656	5,920
Italy	107,880	10,594	4,636	400			1,200	133
Malta, Gozo, and Cyprus Islands	1,528	253						
Netherlands	622,228	89,085	71,605	6,019	48	26		
Norway	21,120	2,628			130	35	390	78
Rumania	3,720	639	48	5	41	16		
Russia in Europe			631	109				
Spain							3,800	1,001
Sweden	14,160	2,223						
Switzerland	4,800	520						
Turkey in Europe	38,400	1,280						
England	36,485,985	5,865,023	639,897	59,261	830	229	46,122	13,677
Scotland	391,100	60,689	6,900	602	72	39		
Ireland	308,120	36,621						
Canada	2,051,011	264,052	3,047,793	291,790	95,593	28,129	596,077	63,966
British Honduras	24,910	2,763	39,325	4,501			130	13
Costa Rica	139,776	13,793	231,564	20,156	96	31	12,743	819
Guatemala	71,388	8,043	258,516	24,589	95	26	9,512	669
Honduras	52,478	6,715	112,614	16,950	644	247	1,598	423
Nicaragua	109,730	13,208	163,590	18,327	1,266	319	9,123	571
Panama	277,357	36,579	200,661	21,823	5,669	2,010	4,259	1,051
Salvador	5,814	729	127,077	10,464	25	10	933	185
Mexico	2,482,065	227,473	2,721,796	262,791	2,612	964	109,847	13,004
Newfoundland and Labrador	96	18			50	24	110	41
Bermuda	46,485	8,943	23,461	3,684	1,038	397	1,052	381
Barbados	43,024	7,222	250	62				
Jamaica	52,956	10,951	24,948	2,207	111	37	497	137

Domestic exports of canned fish from the United States, by countries, 1924—Contd.

Countries	Salmon		Sardines		Tuna		Other canned fish	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Trinidad and Tobago	37,910	$7,082	4,393	$454			60	$31
Other British West Indies	45,744	7,771	17,593	2,849	36	$26	1,882	526
Dutch West Indies	37,026	6,901	3,229	367	349	118	798	132
Cuba	647,574	66,161	2,327,454	181,880	2,240	713	88,406	8,338
Dominican Republic	230,416	23,643	116,428	18,450	481	182	3,038	1,030
French West Indies	2,068	181						
Haiti	5,365	897	1,582	290	157	53	117	65
Virgin Islands of the United States	37,989	4,496	18,685	2,538	146	26	1,816	243
Argentina	218,068	24,048	4,133,186	351,699			175,865	9,820
Bolivia	25,918	2,896	387,830	34,348			180	86
Brazil	13,033	2,442	1,550	160				
Chile	154,006	23,192	699,582	58,473	27	12	6,730	487
Colombia	558,147	64,456	129,894	13,415	7,523	2,941	3,608	747
Ecuador	112,538	12,611	556,354	46,734	124	60	8,614	2,555
Falkland Islands	48	11						
British Guiana	58,742	11,819	66,779	7,382			12,632	1,405
Dutch Guiana	42,346	4,957	16,063	1,923	26	12		
French Guiana	12,586	1,470						
Paraguay	720	109						
Peru	226,972	23,285	568,692	48,061	1,134	467	6,899	1,689
Uruguay	18,130	2,424	13,340	1,108				
Venezuela	957,426	103,093	474,970	36,853	2,384	793	1,786	567
Aden	1,340	188			35	12		
Armenia and Kurdistan			4,500	400				
British India	439,559	74,608	1,200,939	125,723	1,300	446	849	240
Ceylon	134,750	19,412	26,853	3,755	786	317	490	98
Straits Settlements	175,130	18,210	10,595,759	805,326	48	24	214,524	13,614
Other British East Indies			2,880	260				
China	100,425	17,828	572,114	53,497	4,576	1,677	55,814	4,057
Chosen	768	112	5,326	572	300	105	36	11
Java and Madura	260,822	32,483	3,113,243	254,080	97	43	11,050	4,589
Other Dutch East Indies	79,128	10,400	644,556	55,888				
French Indo-China			182,788	17,031			2,231	584
Hejaz, Arabia	1,680	144					550	180
Hongkong	59,852	9,327	772,880	66,051	230	114	17,398	1,222
Japan	249,350	27,847	87,697	8,278	620	275	36,488	5,225
Kwangtung	144	38	131,715	10,750				
Palestine and Syria	14,269	1,601						
Persia					234	81		
Philippine Islands	7,884,986	793,939	15,417,030	1,210,034	2,794	813	432,768	33,136
Siam	3,469	1,386	111,344	8,073				
Turkey in Asia	9,600	1,280						
Australia	7,167,084	1,186,765	8,615	875	4,240	905	2,055	791
British Oceania	23,464	3,016	11,361	1,000			1,191	143
French Oceania	246,556	27,170	92,950	12,670			919	198
New Zealand	102,078	17,289	3,300	192			3,438	212
Other Oceania	59,381	7,218	5,507	678			758	117
Belgian Kongo	1,587	338			28	11		
British West Africa	75,162	6,820	150	37			149	37
British South Africa	980,445	105,558	7,045	1,407	191	47	6,220	931
British East Africa	15,816	2,120			27	13		
Canary Islands	8,388	695						
Egypt	27,376	4,499	7,529	1,297	36	12	96	10
Other French Africa	636	92	384	35				
Liberia	3,164	323	450	65			65	13
Portuguese East Africa	45,648	4,505					341	147
Other Portuguese Africa	444	75	120	35				
Spanish Africa	6,120	639						
Total	67,013,369	9,667,126	51,260,836	4,278,547	138,787	42,927	2,148,323	214,977

COMPARATIVE STATISTICS OF EXPORTS OF CANNED FISH

The exports of canned fish from the United States have been growing steadily for the last three years, as may be seen in the following table. Exports of canned sardines are particularly conspicuous in this respect, those in 1924 having increased over 150 per cent as compared with those of 1922 and over 50 per cent as compared with 1923. The tuna exports also are on the increase, those in 1924 being in excess of the 1923 exports by 80 per cent.

Domestic exports of canned fish, 1922 to 1924

Year	Salmon		Sardines		Tuna	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
1922	63, 797, 279	$7, 962, 375	20, 059, 845	$1, 780, 956	[1]	[1]
1923	59, 594, 422	9, 154, 711	33, 660, 937	2, 919, 767	76, 342	$23, 992
1924	67, 013, 369	9, 667, 126	51, 260, 836	4, 278, 547	138, 787	42, 927

Year	Other		Total	
	Pounds	*Value*	*Pounds*	*Value*
1922	4, 559, 142	$528, 409	88, 416, 266	$10, 271, 740
1923	2, 033, 468	228, 971	95, 365, 169	12, 327, 441
1924	2, 148, 323	214, 977	120, 561, 315	14, 203, 577

[1] Not shown separately in 1922.

BY-PRODUCTS OF THE FISHERIES

The by-products of the fisheries include a variety of materials, such as fish oils, fish scrap and meal, shrimp bran, crushed oyster shells for poultry grit, lime from oyster shells, liquid glue, scales from which pearl essence is extracted, and others. Their production is important in providing a more complete utilization of marine products, or, stated differently, the production of a greater number and volume of products without taking more fish or shellfish from the sea.

If we include the production of materials in the menhaden and whale industries, the total value of by-products in 1924 amounted to $10,308,990, as compared to $12,634,590 in 1923. The decrease is due to a failure of the menhaden industry. Other by-products have increased, compared with former years, as may be seen in the following table, which summarizes the statistics on by-products for the years 1921 to 1924.

Comparative statistics of fishery by-products from 1921 to 1924

Year	Menhaden industry					
	Dried scrap and meal		Acidulated scrap		Oil	
	Tons	*Value*	*Tons*	*Value*	*Gallons*	*Value*
1921	37, 858	$1, 380, 455	44, 804	$905, 640	6, 260, 478	$1, 719, 892
1922	67, 821	2, 665, 441	25, 755	556, 317	7, 102, 677	2, 904, 833
1923	43, 452	2, 029, 406	44, 935	1, 064, 870	7, 461, 365	3, 316, 277
1924	21, 008	996, 866	24, 409	495, 684	3, 923, 904	1, 817, 626

Year	Miscellaneous by-products					
	Dried scrap and meal		Crude or green scrap		Shrimp bran	
	Tons	*Value*	*Tons*	*Value*	*Tons*	*Value*
1921	22, 173	$1, 232, 906	1, 810	$21, 327	628	$16, 814
1922	21, 638	1, 090, 346	390	9, 175	562	15, 398
1923	22, 636	1, 257, 098	1, 593	13, 721	1, 269	48, 290
1924	30, 847	1, 373, 351	4, 097	15, 217	936	31, 580

Year	Fish and whale oils		Crushed oyster shell		Other by-products	Total
	Gallons	*Value*	*Tons*	*Value*	*Value*	*Value*
1921	1, 185, 803	$358, 778	185, 474	$1, 759, 120	$956, 895	$8, 351, 827
1922	3, 432, 796	1, 325, 927	236, 021	2, 005, 838	817, 418	11, 390, 693
1923	3, 912, 436	1, 787, 917	224, 983	1, 986, 249	1, 130, 762	12, 634, 590
1924	5, 287, 391	2, 494, 107	219, 211	2, 019, 254	1, 065, 305	10, 308, 990

FISH SCRAP AND MEAL

In 1924 the production of fish scrap and meal of all kinds amounted to 81,297 tons, valued at $2,912,898. The total value in 1923 was $4,413,385. The decrease was due almost entirely to the small production of menhaden scrap and meal. Noteworthy increases occurred in the production of all other fish scrap and meal excepting shrimp bran, which was produced in lesser amounts than in 1923.

FISH OILS

In 1924 there were produced 3,923,904 gallons of menhaden oil, valued at $1,817,626; 4,044,555 gallons of other fish oils, valued at $1,832,836; 1,141,695 gallons of whale oil, valued at $619,475; and 101,141 gallons of sperm oil, valued at $41,796, making a total of 9,211,295 gallons, valued at $4,311,733. The production of sardine and herring oils was greatly increased as compared with 1923, while a considerable decrease took place in the production of menhaden oils.

LIQUID FISH GLUE

In 1924 the production of liquid fish glue was 502,940 gallons, valued at $550,391, an increase of 8 per cent in quantity and a decrease of 19 per cent in value, as compared with the production in 1923, which was 465,814 gallons, valued at $680,504.

Production of various by-products of the fisheries, 1924

Products	Maine, Massachusetts, and New York		Maryland and Virginia		North Carolina, Georgia, and Florida		Mississippi and Louisiana	
	Quantity	*Value*	*Quantity*	*Value*	*Quantity*	*Value*	*Quantity*	*Value*
Fish scrap and meal:								
Dried, tons	2,780	$119,539	2,375	$48,894				
Acidulated, do	354	7,255						
Pomace, do	3,543	6,262						
Shrimp bran, do					192	$8,890	744	$22,690
Oil:								
Herring, gallons	75,587	24,290	56,743	21,000				
Sperm, do	13,391	6,696						
Cod-liver, crude, do	106,415	65,916						
Miscellaneous, do	511	41	2,650	1,191	38,610	16,005		
Liquid glue, do	502,940	550,391						
Miscellaneous by-products [1], do	1,882,627	140,527	141,000	9,750	169,268	24,826		
Total		920,917		80,835		49,721		22,690

Products	Alaska, Washington, Oregon, and California		Indiana, Wisconsin, and Pennsylvania		Total	
	Quantity	*Value*	*Quantity*	*Value*	*Quantity*	*Value*
Fish scrap and meal:						
Dried, tons	25,692	$1,204,918			30,847	$1,373,351
Acidulated, do			200	$1,700	554	8,955
Pomace, do					3,543	6,262
Shrimp bran, do					936	31,580
Oil:						
Salmon, gallons	169,561	76,554			169,561	76,554
Sardine, do	2,338,711	1,076,903			2,338,711	1,076,903
Tuna, do	35,408	10,801			35,408	10,801
Herring, do	1,171,672	514,909	20,000	11,200	1,324,002	571,399
Whale, do	1,141,695	619,475			1,141,695	619,475
Sperm, do	87,750	35,100			101,141	41,796
Cod-liver, crude, do					106,415	65,916
Miscellaneous, do	25,516	12,758	3,171	1,268	70,458	31,263
Liquid glue, do					502,940	550,391
Miscellaneous by-products [1], do	49,500	619			2,242,395	175,722
Total		3,552,037		14,168		4,640,368

[1] Includes shark hides and fins, herring skins and scales, isinglass, and whale tails.

SHELL BY-PRODUCTS

In 1924 the by-products of the oyster industry, consisting of crushed oyster shells for poultry grit, lime dust, and lime, amounted to 289,480 tons, valued at $2,355,638, as compared with 308,791 tons, valued at $2,358,535, in 1923. In addition to the oyster-shell products there were 234 tons of crushed marine clam shells, valued at $2,808.

Production of oyster-shell by-products, 1924

States	Poultry grit		Lime		Total	
	Tons	*Value*	*Tons*	*Value*	*Tons*	*Value*
Rhode Island, New York, New Jersey, and Pennsylvania	12,634	$158,044	3,695	$14,438	16,329	$172,482
Maryland	70,961	708,042	28,309	88,516	99,270	796,558
Virginia	22,019	226,126	28,968	205,663	50,987	431,789
North Carolina, South Carolina, and Georgia	6,472	72,098	3,131	17,625	9,603	89,723
Florida and Alabama	16,565	141,185	693	1,408	17,258	142,593
Mississippi	30,266	257,920	1,400	750	31,666	258,670
Louisiana	56,288	419,785	3,478	6,251	59,766	426,036
Texas	4,006	36,054	595	1,733	4,601	37,787
Total	219,211	2,019,254	70,269	336,384	289,480	2,355,638

MENHADEN INDUSTRY

In 1924 there were in operation 16 menhaden factories in Virginia, 14 in North Carolina, 3 in New Jersey, 3 in Delaware, 3 in Florida, 2 in Texas, 2 in New York, 1 in Connecticut, and 1 in Georgia, making a total of 45 plants, as compared to 52 in 1923.

There were produced 21,008 tons of dry scrap and meal, valued at $996,866, 24,409 tons of acidulated scrap, valued at $495,684, and 3,923,904 gallons of oil, valued at $1,817,626, making a total production valued at $3,310,176, as compared to $6,410,553 in 1923. The decrease, amounting to 48 per cent, is due largely to a shortage of fish and has placed the menhaden industry in a precarious position economically.

Products of the menhaden industry, 1924

Products	Connecticut and New York		New Jersey and Delaware		Virginia	
	Quantity	*Value*	*Quantity*	*Value*	*Quantity*	*Value*
Fish utilized: Menhaden, number	78,797,100	$475,814	86,478,000	$513,141	137,175,493	$630,320
Manufactured products:						
Dry scrap and fish meal, tons	976	50,800	376	17,331	10,100	521,351
Acidulated scrap, do	5,423	117,037	7,960	185,852		
Total	6,399	167,837	8,336	203,183	10,100	521,351
Oil, gallons	676,143	272,607	623,247	282,448	1,408,312	686,581
Grand total		440,444		485,631		1,207,932

Products of the menhaden industry, 1924—Continued

Products	North Carolina		Georgia, Florida, and Texas		Total	
Fish utilized: Menhaden ----------number--	*Quantity* 115,876,333	*Value* $452,643	*Quantity* 95,530,380	*Value* $314,219	*Quantity* [1] 513,857,306	*Value* $2,386,137
Manufactured products:						
Dry scrap and fish meal ----------tons--	5,858	252,350	3,698	155,034	[2] 21,008	996,866
Acidulated scrap-----do----	3,875	99,613	7,151	93,182	24,409	495,684
Total----------	9,733	351,963	10,849	248,216	45,417	1,492,550
Oil----------gallons--	783,379	382,787	432,823	193,203	3,923,904	1,817,626
Grand total----------	----------	734,750	----------	441,419	----------	3,310,176

[1] 308,314,384 pounds. [2] Of this quantity 1,750 tons, valued at $101,067, were reported as fish meal.

COLD-STORAGE HOLDINGS OF FROZEN FISH

The statistics of the cold-storage holdings of frozen fish and the quantities of fish frozen are collected by the Bureau of Agricultural Economics, Department of Agriculture, and in 1924, as in previous years, were published monthly and disseminated to the frozen-fish trade by the Bureau of Fisheries. A summary of the statistics for the year is herewith presented. Statistics for previous years are also given for comparison. It will be found that in some cases they do not correspond to totals previously published, for in the past there has been some variation with respect to dividing the year at January 15 or December 15. The statistics here given have been put upon a uniform basis by dividing each year, so as to begin with the report for the month ending January 15 and end with that for the month ending on December 15 of each year.

During 1924 cold-storage holdings were rather larger than during the previous year. They varied between 21,488,525 and 70,405,786 pounds, the smallest holdings being recorded in April and the largest in November. The average monthly holdings during the year were 45,040,533 pounds, as compared with the average in 1923 of 36,202,434 pounds, an increase of 24.4 per cent. Compared with the five-year average, the monthly holdings in 1924 were only slightly high, being 0.5 per cent above the five-year average. The following tables give the summaries of the statistics of the cold-storage holdings of the United States in 1924 and previous years.

Comparative statement of monthly cold-storage holdings of frozen fish in 1924 and 1923, and the five-year average

Month	1924	1923	Five-year average	Increase (+) or decrease (−)	
				Compared with 1923	Compared with five-year average
	Pounds	*Pounds*	*Pounds*	*Per cent*	*Per cent*
January----------	52,627,290	40,032,255	56,880,000	+31.46	−7.48
February----------	40,420,614	27,069,882	44,490,000	+49.32	−9.15
March----------	29,570,628	16,723,513	31,119,000	+76.82	−4.98
April----------	21,488,525	10,589,532	22,852,000	+102.92	−5.97
May----------	21,839,714	12,312,003	22,542,000	+77.39	−3.12
June----------	27,115,359	17,779,934	29,506,000	+52.51	−8.10
July----------	36,036,010	27,237,105	37,862,000	+32.30	−4.82
August----------	49,026,140	39,100,868	46,209,000	+25.38	+6.10
September----------	56,606,759	53,220,398	54,941,000	+6.36	+3.03
October----------	67,024,996	62,616,212	63,553,000	+7.04	+5.46
November----------	70,405,786	63,457,565	65,101,000	+10.95	+8.15
December----------	68,324,572	64,289,945	62,430,000	+6.28	+9.44
Average for year----------	45,040,533	36,202,434	44,790,000	+24.41	+.55

Monthly holdings of frozen fish in the United States in 1924, by species, and in 1917 to 1923, by totals

Species	Month ended—					
	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Bluefish (all trade sizes)	422, 210	252, 617	177, 324	149, 774	107, 891	115, 388
Butterfish (all trade sizes)	409, 825	221, 176	130, 889	55, 812	42, 778	170, 802
Catfish	236, 109	170, 876	111, 494	86, 557	162, 519	162, 614
Ciscoes (including bluefin, blackfin, chub, lake herring, etc.)	10, 323, 849	8, 117, 715	5, 353, 289	3, 963, 579	3, 118, 078	2, 702, 213
Ciscoes (tullibees)	648, 304	778, 131	714, 642	726, 296	770, 802	751, 270
Cod, haddock, hake, pollock	1, 104, 551	881, 921	686, 803	387, 404	464, 035	476, 257
Croaker	249, 115	103, 637	52, 387	84, 540	296, 056	303, 755
Flounders	517, 028	396, 187	325, 867	226, 210	214, 545	384, 092
Halibut (all trade sizes)	5, 533, 267	3, 753, 674	2, 309, 934	3, 341, 501	4, 074, 417	5, 647, 312
Herring, sea (including alewives and bluebacks)	2, 309, 165	1, 742, 173	1, 744, 364	708, 029	1, 927, 109	2, 710, 163
Lake trout	1, 232, 855	897, 434	745, 146	282, 200	269, 522	405, 652
Mackerel (except Spanish)	4, 355, 166	3, 266, 074	2, 063, 094	1, 225, 933	917, 815	1, 013, 864
Pike perches and pike or pickerel	2, 461, 107	2, 320, 771	1, 332, 453	543, 328	888, 041	892, 128
Sablefish (black cod)	1, 915, 018	1, 522, 302	1, 322, 127	964, 102	466, 759	378, 366
Salmon:						
Silver and fall	2, 598, 415	1, 834, 964	1, 414, 845	921, 449	726, 383	725, 201
Steelhead trout	697, 411	181, 446	105, 674	63, 757	46, 785	61, 918
All other	2, 985, 058	2, 355, 794	1, 662, 583	1, 189, 857	864, 086	1, 179, 168
Scup (porgies)	679, 400	468, 128	174, 787	87, 036	32, 414	76, 481
Shad and shad roe	461, 483	580, 256	144, 189	107, 366	215, 599	409, 092
Shellfish	781, 215	714, 943	450, 213	243, 944	323, 213	400, 554
Smelts, eulachon, etc	442, 654	789, 531	1, 266, 708	537, 035	273, 161	225, 779
Squeteagues or "sea trout"	769, 540	375, 837	132, 256	39, 042	166, 433	213, 049
Squid	580, 280	326, 997	180, 008	37, 905	166, 656	1, 660, 087
Sturgeon and spoonbill cat	299, 144	188, 510	133, 217	54, 404	153, 400	272, 877
Suckers	32, 173	32, 271	21, 600	16, 092	35, 434	49, 153
Whitefish	1, 381, 207	1, 463, 003	1, 981, 538	1, 440, 949	1, 073, 506	1, 025, 573
Whiting	3, 792, 699	2, 244, 524	1, 446, 557	1, 150, 959	932, 085	1, 007, 427
Miscellaneous frozen fish	5, 409, 042	4, 439, 722	3, 386, 640	2, 853, 465	3, 110, 192	3, 695, 124
Total, 1924	52, 627, 290	40, 420, 614	29, 570, 628	21, 488, 525	21, 839, 714	27, 115, 359
Total, 1923	40, 032, 255	27, 069, 882	16, 723, 513	10, 589, 532	12, 312, 003	17, 779, 934
Total, 1922	48, 320, 212	37, 742, 262	25, 474, 714	17, 484, 975	17, 075, 917	20, 821, 345
Total, 1921	53, 851, 000	42, 116, 000	33, 404, 000	28, 440, 000	26, 346, 000	32, 311, 000
Total, 1920	61, 510, 357	47, 904, 057	29, 958, 132	20, 632, 834	19, 803, 817	27, 779, 230
Total, 1919	80, 683, 761	67, 617, 473	50, 036, 475	37, 110, 856	37, 174, 104	48, 840, 359
Total, 1918	51, 116, 37	35, 907, 071	28, 457, 301	26, 548, 272	31, 403, 425	50, 298, 027
Total, 1917	32, 234, 530	14, 727, 099	13, 374, 429	9, 516, 217	14, 040, 024	27, 791, 047

Monthly holdings of frozen fish in the United States in 1924, by species, and in 1917 to 1923, by totals—Continued

Species	Month ended—					
	July 15	Aug. 15	Sept. 15	Oct. 15	Nov. 15	Dec. 15
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Bluefish (all trade sizes)	101, 248	93, 478	88, 863	106, 662	124, 308	319, 914
Butterfish (all trade sizes)	322, 373	437, 948	805, 413	849, 543	886, 686	735, 619
Catfish	227, 198	219, 699	185, 944	167, 556	305, 900	244, 358
Ciscoes (including bluefin, blackfin, chub, lake herring, etc.)	2, 530, 838	3, 213, 024	5, 044, 751	7, 856, 427	8, 090, 621	9, 608, 580
Ciscoes (tullibees)	810, 073	959, 611	732, 078	785, 414	859, 784	712, 911
Cod, haddock, hake, pollock	622, 138	694, 717	709, 667	731, 717	887, 680	1, 041, 335
Croaker	378, 961	757, 897	616, 724	402, 952	278, 322	222, 972
Flounders	437, 565	395, 901	383, 913	345, 937	395, 178	474, 082
Halibut (all trade sizes)	8, 376, 481	11, 735, 918	14, 107, 183	14, 609, 027	13, 663, 426	11, 458, 888
Herring, sea (including alewives and bluebacks)	2, 781, 164	3, 661, 482	3, 317, 720	3, 653, 279	4, 453, 975	4, 632, 857
Lake trout	629, 748	653, 072	686, 986	928, 113	1, 816, 384	1, 952, 914
Mackerel (except Spanish)	2, 525, 839	3, 893, 770	4, 922, 247	4, 894, 724	4, 614, 956	4, 050, 396
Pike perches and pike or pickerel	992, 344	790, 854	854, 279	906, 679	1, 254, 421	1, 892, 949
Sablefish (black cod)	442, 789	911, 705	1, 159, 867	1, 529, 649	1, 700, 014	1, 359, 316
Salmon:						
Silver and fall	1, 259, 815	1, 928, 464	2, 508, 903	5, 782, 171	6, 219, 428	5, 155, 350
Steelhead trout	260, 840	892, 099	903, 278	940, 952	700, 420	644, 716
All other	2, 109, 858	3, 506, 271	4, 620, 121	6, 119, 933	6, 281, 463	5, 718, 124
Scup (porgies)	218, 693	290, 971	254, 732	226, 179	191, 924	132, 473
Shad and shad roe	876, 921	796, 599	683, 414	717, 441	801, 357	879, 488
Shellfish	457, 114	489, 748	542, 485	766, 722	1, 108, 148	1, 310, 634
Smelts, eulachon, etc	208, 077	211, 776	271, 425	329, 550	318, 494	288, 818
Squeteagues or "sea trout"	259, 604	279, 359	256, 209	295, 721	498, 316	446, 157
Squid	2, 117, 062	2, 281, 461	2, 230, 726	2, 558, 046	2, 429, 721	1, 850, 358
Sturgeon and spoonbill cat	369, 353	508, 152	548, 563	543, 181	530, 900	554, 786
Suckers	49, 491	43, 784	38, 028	38, 435	37, 582	39, 024
Whitefish	1, 149, 463	1, 306, 126	1, 351, 440	1, 410, 453	1, 821, 871	2, 134, 465
Whiting	1, 527, 493	3, 008, 257	3, 368, 558	3, 218, 372	3, 466, 747	3, 500, 248
Miscellaneous frozen fish	3, 993, 467	5, 063, 997	5, 413, 242	6, 310, 161	6, 667, 760	6, 962, 840
Total, 1924	36, 036, 010	49, 026, 140	56, 606, 759	67, 024, 996	70, 405, 786	68, 324, 572
Total, 1923	27, 237, 105	39, 100, 868	53, 220, 398	62, 616, 212	63, 457, 565	64, 289, 945
Total, 1922	25, 620, 042	32, 226, 170	41, 141, 144	54, 756, 783	54, 502, 283	48, 689, 830
Total, 1921	40, 160, 000	47, 431, 000	54, 469, 000	58, 899, 000	61, 228, 000	59, 125, 646
Total, 1920	36, 617, 706	47, 140, 132	56, 295, 975	64, 730, 531	67, 549, 377	65, 841, 000
Total, 1919	59, 674, 301	65, 145, 234	69, 580, 555	76, 763, 253	78, 769, 101	74, 202, 339
Total, 1918	64, 864, 532	82, 554, 798	89, 203, 946	93, 811, 909	99, 631, 789	96, 600, 247
Total, 1917	38, 431, 221	44, 024, 666	47, 197, 660	60, 676, 722	70, 938, 957	69, 986, 671

QUANTITIES OF FISH FROZEN

The total quantity of fish frozen during the year ended December 15, 1924, was 97,324,144 pounds, as compared with 91,548,643 pounds in 1923, an increase of 6 per cent. The principal species frozen during the year were halibut, 14,650,787 pounds; salmon, including steelhead trout, 14,309,666 pounds; ciscoes, 13,195,023 pounds; herring, 8,695,698 pounds; whiting, 7,528,339 pounds; mackerel, 5,457,676 pounds; and pike perch, pike, or pickerel, 3,200,624 pounds. The following tables give the statistics of the quantities of fish frozen during 1924.

Fish frozen monthly in 1924, by species, and in 1920 to 1923, by totals

Species	Month ended—						
	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15	July 15
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Bluefish (all trade sizes)	57,022	1,068	1,729	28,795	8,593	33,210	20,486
Butterfish (all trade sizes)	5,160	6,129		9,781	23,833	149,087	172,998
Catfish	9,514	14,533	3,769	5,197	90,641	26,599	81,646
Ciscoes (including bluefin, blackfin chub, lake herring, etc.)	717,719	2,621	34,938	11,032	76,512	149,447	329,288
Ciscoes (tullibees)	38,686	52,976	55,652	32,996	101,292	16,257	75,577
Cod, haddock, hake, pollock	54,840	61,987	62,937	22,674	203,089	91,966	254,479
Croaker	925			60,000	229,833	8,887	77,457
Flounders	24,719	21,177	12,417	5,920	61,803	224,727	116,404
Halibut (all trade sizes)	621,709	283,522	158,687	1,146,596	1,164,138	1,736,650	3,092,267
Herring, sea (including alewives and blueblacks)	122,947	384,078	264,944	101,374	1,561,301	1,329,671	595,183
Lake trout	73,082	64,400	38,786	4,341	70,663	154,875	258,541
Mackerel (except Spanish)	122,131	91,945	59,321	30,144	58,436	269,531	1,422,598
Pike perches and pike or pickerel	118,903	232,495	149,241	69,915	412,167	209,408	251,928
Sablefish (black cod)	96,523	37,364	108,252	38,889	22,977	63,353	163,458
Salmon:							
Silver and fall	102,862	68,096	19,617	18,168	37,273	89,613	598,366
Steelhead trout		1,775			1,310	26,241	292,611
All other	32,535	43,328	98,809	77,699	77,382	545,276	1,452,120
Scup (porgies)					7,408	64,775	149,413
Shad and shad roe	5,855	1,518	50	18,034	155,673	171,197	287,100
Shellfish	118,307	51,305	33,224	36,150	160,014	147,096	146,875
Smelts, eulachon, etc	8,740	100,381	102,827	11,853	5,748	1,542	45
Squeteagues or "sea trout"	35				146,390	53,793	63,640
Squid	32,104	4,353	1,426	7,803	149,548	1,527,715	510,464
Sturgeon and spoonbill cat	5,000	1,621	7,320	8,151	132,809	143,408	125,387
Suckers	21,495	12,103	3,496		20,465	8,515	1,509
Whitefish	41,006	292,884	246,950	96,201	49,352	7,140	111,062
Whiting	217,385	278,410	604,673	602,928	89,506	210,994	741,106
Miscellaneous frozen fish	529,894	330,094	348,408	284,725	922,105	820,543	604,003
Total, 1924	3,179,098	2,440,163	2,417,473	2,729,366	6,040,261	8,281,516	11,996,011
Total, 1923	2,741,538	1,662,135	1,412,490	1,400,078	5,026,888	7,671,127	11,871,645
Total, 1922	2,441,892	1,452,801	1,363,942	1,496,538	1,980,435	5,849,537	7,376,237
Total, 1921	4,005,000	2,843,000	1,770,000	2,413,000	2,698,000	9,624,000	10,151,000
Total, 1920	2,291,082	2,273,744	2,630,482	2,465,375	3,687,538	10,094,367	12,761,791

Fish frozen monthly in 1924, by species, and in 1920 to 1923, by totals—Continued

Species	Month ended— Aug. 15	Sept. 15	Oct. 15	Nov. 15	Dec. 15	Total
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Bluefish (all trade sizes)	8,595	12,251	34,411	29,993	176,184	412,337
Butterfish (all trade sizes)	139,244	393,083	100,090	97,484	34,733	1,131,622
Catfish	29,366	8,988	17,573	90,083	37,116	415,025
Ciscoes (including bluefin, blackfin, chub, lake herring, etc.)	1,214,225	2,562,454	4,195,606	1,293,120	2,608,061	13,195,023
Ciscoes (tullibees)	169,928	40,195	64,755	102,914	99,557	850,785
Cod, haddock, hake, pollock	206,956	114,139	200,005	305,415	283,676	1,862,163
Croaker	377,321	44,913	3,663	1,167	404	804,570
Flounders	65,704	54,768	102,043	76,276	42,798	808,756
Halibut (all trade sizes)	3,056,370	1,492,447	677,516	745,835	475,050	14,650,787
Herring, sea (including alewives and bluebacks)	1,282,551	195,236	869,084	1,142,898	846,431	8,695,698
Lake trout	68,097	159,301	304,111	873,307	244,280	2,313,784
Mackerel (except Spanish)	1,431,237	1,234,266	161,003	334,840	242,244	5,457,696
Pike perches and pike or pickerel	65,507	154,563	168,433	459,492	908,572	3,200,624
Sablefish (black cod)	459,074	382,366	525,326	303,094	90,630	2,291,306
Salmon:						
Silver and fall	753,695	446,725	3,261,539	989,760	150,974	6,536,688
Steelhead trout	675,386	172,096	124,157	14,330	4,015	1,311,921
All other	1,597,773	457,703	1,362,144	614,036	102,252	6,461,057
Scup (porgies)	95,926	590	4,231	5,557	4,203	332,103
Shad and shad roe	44,317	2,796	8,657	107,489	37,288	839,974
Shellfish	158,032	217,118	347,886	503,263	349,775	2,269,045
Smelts, eulachon, etc	13,008	67,828	79,903	40,020	52,065	483,960
Squeteagues or "sea trout"	63,762	25,020	51,552	219,023	24,854	648,069
Squid	274,917	161,163	516,404	140,054	26,601	3,352,552
Sturgeon and spoonbill cat	169,064	109,404	44,246	21,756	19,556	787,722
Suckers	483	662	1,798	2,763	5,879	79,168
Whitefish	141,691	114,176	84,010	328,092	263,481	1,776,045
Whiting	1,996,887	783,336	486,952	1,147,826	368,336	7,528,339
Miscellaneous frozen fish	982,525	1,177,685	1,080,836	864,986	881,521	8,827,325
Total, 1924	15,541,641	10,585,272	14,877,934	10,854,873	8,380,536	97,324,144
Total, 1923	13,943,978	16,417,132	12,511,606	6,951,639	9,938,387	91,548,643
Total, 1922	9,121,160	10,826,942	16,830,080	9,344,469	7,069,995	75,154,028
Total, 1921	9,845,000	9,356,000	9,990,000	9,869,000	8,173,000	80,737,000
Total, 1920	13,620,232	11,803,606	11,168,810	9,711,800	9,750,844	92,259,671

Quantities of fish frozen during 1924, by geographical sections and by species

Species	New England	Middle Atlantic	South Atlantic	North Central, East
	Pounds	*Pounds*	*Pounds*	*Pounds*
Bluefish (all trade sizes)	522	124,921		285,811
Butterfish (all trade sizes)	111,620	978,732	36,110	
Catfish	86	5,417		78,946
Ciscoes (including bluefin, blackfin, chub, lake herring, etc.)		9,600,868		2,825,105
Ciscoes (tullibees)	4,844	499,001	3,850	146,332
Cod, haddock, hake, pollock	788,105	614,211	1,500	31,073
Croakers		643,571	142,600	13,999
Flounders	264,291	455,082		7,845
Halibut (all trade sizes)	568,521	356,571		1,404,270
Herring, sea (including alewives and bluebacks)	7,420,148	651,534	13,200	218,493
Lake trout	62,812	587,841		1,385,951
Mackerel (except Spanish)	3,876,176	969,560	15,725	96,941
Pike perches and pike or pickerel	955	1,410,869		1,564,171
Sablefish (black cod)		1,270		125,037
Salmon:				
Silver and fall	259,561	111,456	250	298,155
Steelhead trout	5,840	59,935		900
All other	482,827	114,682		378,874
Scup (porgies)	231,351	99,108		
Shad and shad roe	431,541	108,830	4,720	43,923
Shellfish	299,405	717,949	221,344	464,121
Smelts, eulachon, etc	53,227	4,573		140,625
Squeteagues or "sea trout"	1,986	594,883	51,200	
Squid	2,352,507	950,280		34,908
Sturgeon, and spoonbill cat		583,166	4,300	15,996
Suckers		7,574		71,594
Whitefish	4,418	492,636		1,190,272
Whiting	3,362,737	948,942	2,179	12,912
Miscellaneous frozen fish	1,101,890	2,567,295	335,878	1,543,475
Total	21,686,370	24,260,757	832,856	12,379,729

Quantities of fish frozen during 1924, by geographical sections and by species—Continued

Species	North Central, West	South Central	Pacific	Total
	Pounds	*Pounds*	*Pounds*	*Pounds*
Bluefish (all trade sizes)	683	400		412, 337
Butterfish (all trade sizes)			5, 160	1, 131, 622
Catfish	291, 579	38, 997		415, 025
Ciscoes (including bluefin, blackfin, chub, lake herring, etc.)	749, 050		20, 000	13, 195, 023
Ciscoes (tullibees)	142, 386	700	53, 672	850, 785
Cod, haddock, hake, pollock	40, 195	930	386, 149	1, 862, 163
Croakers		4, 400		804, 570
Flounders	69		81, 469	808, 756
Halibut (all trade sizes)	444, 528	3, 830	11, 873, 067	14, 650, 787
Herring, sea (including alewives and bluebacks)	266, 770	7, 500	118, 053	8, 695, 698
Lake trout	275, 180	1, 000		2, 313, 784
Mackerel (except Spanish)	23, 267	540	475, 487	5, 457, 696
Pike perches and pike or pickerel	220, 309	1, 250	3, 070	3, 200, 624
Sablefish (black cod)	62, 931		2, 102, 068	2, 291, 306
Salmon:				
Silver and fall	167, 849	100	5, 699, 317	6, 536, 688
Steelhead trout			1, 245, 246	1, 311, 921
All other	79, 612	18, 063	5, 386, 999	6, 461, 057
Scup (porgies)	1, 644			332, 103
Shad and shad roe	9, 494	15	241, 451	839, 974
Shellfish	152, 437	4, 031	409, 758	2, 269, 045
Smelts, eulachon, etc	40, 388		245, 147	483, 960
Squeteagues or "sea trout"				648, 069
Squid	9, 608		5, 249	3, 352, 552
Sturgeon, and spoonbill cat	941	53, 877	130, 442	787, 722
Suckers				79, 168
Whitefish	81, 693	1, 991	5, 035	1, 776, 045
Whiting	3, 201, 569			7, 528, 339
Miscellaneous frozen fish	904, 527	1, 127, 470	1, 246, 790	8, 827, 325
Total	7, 166, 709	1, 264, 095	29, 733, 629	97, 324, 144

Fish frozen in 1924, by geographical sections and by months

Month ending the 15th of—	New England	Middle Atlantic	South Atlantic	North Central, East	North Central, West	South Central	Pacific	Total
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
January	110, 065	582, 997	10, 025	1, 227, 714	517, 798	87, 029	643, 470	3, 179, 098
February	144, 971	283, 039	17, 295	1, 090. 300	624. 607	50, 493	229, 458	2, 440, 163
March	170, 876	148, 291	10, 900	867, 218	786, 670	96, 729	336, 789	2, 417, 473
April	29. 294	168, 930	82, 715	282, 333	824, 026	63, 652	1, 278, 416	2, 729. 366
May	1, 886, 814	1, 317. 007	107, 840	702, 187	461. 240	169, 582	1, 395, 591	6, 040. 261
June	2, 893. 482	1, 636, 262	58, 475	700, 573	205. 148	62, 814	2, 724, 762	8, 281, 516
July	3, 613, 056	2, 126, 272	28. 108	616. 924	250. 409	65. 109	5, 296, 133	11, 996, 011
August	5, 421, 320	2, 939, 285	103, 308	304, 840	254, 989	160. 287	6, 357, 612	15, 541, 641
September	2, 279, 202	3, 993, 360	99, 729	664, 210	370. 349	181. 486	2, 996, 936	10. 585. 272
October	2, 069, 698	5, 230, 149	210, 457	819, 246	760, 660	121, 983	5, 665, 741	14, 877, 934
November	2, 025, 623	3, 158. 908	84, 769	2, 330, 291	1, 048. 406	98, 061	2, 108, 815	10, 854. 873
December	1, 041, 969	2, 676, 257	19, 235	2, 773, 893	1, 062, 407	106, 869	699, 906	8. 380, 536
Total	21, 686, 370	24, 260, 757	832, 856	12, 379, 729	7, 166, 709	1, 264, 094	29, 733. 629	97, 324, 144

NEW ENGLAND VESSEL FISHERIES

GENERAL STATISTICS

The vessel fisheries centering at Boston and Gloucester, Mass., and Portland, Me., were more productive in 1924 than in the previous year, but there was a slight decrease in the value of the products. There was an increase of 14.38 per cent in the number of trips and of 4.58 per cent in the quantity of products, with a decrease of 0.83 per cent in their value, as compared with 1923. The increase in the number of trips was all at Boston and Gloucester. There was an

increase in products at each of the three ports and in the value at Gloucester but a decrease in value at Boston and Portland. The increase in the number of trips at Boston was 10.90 per cent and at Gloucester 36.61 per cent, with a decrease of 0.31 per cent at Portland. At Boston the increase in the products landed amounted to 5.44 per cent, with a decrease of 0.59 per cent in the value; at Gloucester there was an increase of 2.33 per cent in quantity and of 14.36 per cent in value, and at Portland an increase of 2.80 per cent in quantity with a decrease of 22.19 per cent in value. Statistics of the fisheries have been collected by the local agents and published in monthly bulletins, showing by species and fishing grounds the quantities and values of fishery products landed by American fishing vessels during the year at these ports. Two annual bulletins have been issued, one showing the catch by months and the other by fishing grounds.

The fishing fleet at these ports during the calendar year 1924 numbered 343 sail, steam, and gasoline vessels, including 32 steam trawlers. These vessels landed at Boston 3,735 trips, aggregating 130,966,256 pounds of fish, valued at $5,401,590; at Gloucester, 2,157 trips, aggregating 35,845,920 pounds, valued at $1,041,476; and at Portland, 1,583 trips, aggregating 16,136,018 pounds, valued at $549,886. The total for the three ports amounted to 7,475 trips, aggregating 182,948,194 pounds of fresh and salted fish having a value to the fishermen of $6,992,952.

Compared with the previous year there was an increase of 940 trips, or 14.38 per cent, in the total number landed at Boston, Gloucester, and Portland, and an increase of 8,006,725 pounds, or 4.58 per cent, in quantity, and a decrease of $58,202, or 0.83 per cent, in the value of the products landed. There was a small decrease in both the quantity and value of cod and an increase in the quantity with a decrease in the value of haddock. Hake, pollock, cusk, and herring increased in both quantity and value. Halibut decreased in both quantity and value, while mackerel and swordfish decreased in quantity but increased in value. The catch of cod declined 1,206,521 pounds, or 1.92 per cent, in quantity and $45,835, or 2.10 per cent, in value, and haddock increased 6,140,252 pounds, or 8.32 per cent, in quantity but decreased $114,572, or 4.73 per cent, in value. Hake increased 946,834 pounds, or 14.94 per cent, in quantity and $43,734, or 30.72 per cent, in value; pollock increased 280,952 pounds, or 5.85 per cent, in quantity and $7,249, or 4.76 per cent, in value; and cusk increased 407,385 pounds, or 13.59 per cent, in quantity and $6,386, or 10.34 per cent, in value. The catch of halibut decreased 452,358 pounds, or 9.28 per cent, in quantity and $133,045, or 14.44 per cent, in value. The mackerel catch decreased 1,807,719 pounds, or 15.63 per cent, in quantity and increased $54,147, or 11.10 per cent in value; and swordfish decreased 432,003 pounds, or 17.59 per cent, in quantity and increased $1,718, or 0.38 per cent, in value. The herring catch increased 2,927,896 pounds, or 197.45 per cent, in quantity and $83,349, or 187.22 per cent, in value. The Newfoundland herring catch increased from 1,219,200 pounds, valued at $40,861, in 1923, to 2,943,480 pounds, valued at $108,371, in 1924. In the various other species combined there was an increase of 1,202,007 pounds, or 30 per cent, in quantity and $38,667, or 20.94 per cent, in value.

The catch of scrod cod landed at these ports decreased from 414,659 pounds, valued at $6,447, in 1923, to 318,440 pounds, valued at $5,371, in 1924, and the catch of scrod haddock increased from 4,845,695 pounds, valued at $94,481, in 1923, to 11,927,105 pounds, valued at $199,386, in 1924. The small quantity of these grades landed, as compared with other grades of these species, is said to be due to the fact that the price is so low that the fishermen do not save all that are caught.

The following tables present in detail, by fishing grounds and also by months, the fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels for the calendar year 1924. The weights of fresh and salted fish given in these statistics represent the fish as landed from the vessels, and the values are those received by the fishermen. The grade, or sizes, given for certain species are those recognized in the trade.

Statement, by fishing grounds, of quantities and value of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924

Fishing grounds	Number of trips	Cod							
		Large (10 pounds and over)				Market (under 10 and over 2½ pounds)			
		Fresh		Salted		Fresh		Salted	
LANDED AT BOSTON									
East of 66° W. longitude		*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
La Have Bank	32	320,552	$17,905			173,085	$6,072		
Western Bank	109	1,980,007	84,153	11,000	$358	739,690	21,353		
Quereau Bank	35	30,760	1,129	6,000	255	1,490	33		
Green Bank	4								
Grand Bank	25	16,130	778			2,800	112		
St. Peters Bank	13	4,700	165			500	10		
Burgeo Bank	1								
Off Newfoundland	1								
Cape Shore	52	231,385	11,912			113,840	4,164		
The Gully	2								
Labrador Coast	1								
West of 66° W. longitude									
Browns Bank	184	2,530,858	109,895			1,768,242	48,876		
Georges Bank	720	11,864,940	428,888			3,964,873	105,209		
Cashes Bank	13	98,960	5,176			35,950	1,224		
Clark Bank	1	3,750	375			3,050	153		
Fippenies Bank	3	37,300	2,003			4,230	104		
Tillies Bank	4								
Middle Bank	269	177,988	12,021			95,455	4,093		
Jeffreys Ledge	414	427,313	32,852			201,230	9,388		
South Channel	886	5,669,936	283,103			2,730,261	86,015		
Nantucket Shoals	148	615,429	37,455			636,685	21,487		
Off Chatham	86	107,691	5,835			103,315	3,771		
Seal Island	2	16,100	752			21,000	493		
Shore, general	730	759,493	36,045			363,730	11,910		
Total	3,735	24,893,292	1,070,442	17,000	613	10,959,426	324,467		

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924—Continued

Fishing grounds	Number of trips	Cod							
		Large (10 pounds and over)				Market (under 10 and over 2½ pounds)			
		Fresh		Salted		Fresh		Salted	
		Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT GLOUCESTER									
East of 66° W. longitude									
La Have Bank	15	311,620	$7,221	112,142	$5,689	133,950	$3,252	22,730	$964
Western Bank	98	6,193,275	142,089	626,075	31,330	2,625,781	47,854	501,517	19,594
Quereau Bank	26	46,555	1,586	234,315	11,336	7,945	240	38,840	1,481
Green Bank	3			31,285	1,687			3,505	158
Grand Bank	31	40,230	924	228,454	10,875	3,835	91	41,480	1,597
St. Peters Bank	15	10,830	246	150,803	7,454	1,230	22	28,382	1,111
Off Newfoundland	11								
Cape Shore	11	67,145	1,504			72,755	1,286		
Labrador Coast	1			4,670	234			205	8
West of 66° W. longitude									
Browns Bank	35	575,790	12,914	66,510	3,356	379,175	6,651	12,265	461
Georges Bank	162	4,458,555	100,358	406,205	20,116	747,555	13,979	83,665	3,188
Cashes Bank	1								
Middle Bank	23								
South Channel	37	54,020	1,315			139,760	2,626		
Nantucket Shoals	4	2,165	54			9,770	179		
Shore, general	1,684	2,469,465	117,698	1,763	79	39,605	744	317	11
Total	2,157	14,229,650	385,909	1,862,222	92,156	4,161,361	76,924	732,906	28,573
LANDED AT PORTLAND									
East of 66° W longitude									
La Have Bank	4	14,645	445	12,300	554	10,735	252	2,400	84
Western Bank	30	1,583,820	34,890	78,885	4,063	150,800	3,512	15,225	633
Quereau Bank	5			9,380	478			1,280	51
Green Bank	1								
Grand Bank	2								
St. Peters Bank	3	8,850	288	3,300	157	825	17	2,000	50
Burgeo Bank	1								
Cape Shore	13								
Gulf of St. Lawrence	1								
St. Anns Bank	1								
The Gully	1	2,500	63						
West of 66° W. longitude									
Browns Bank	4	9,270	209	8,635	432	1,110	22	1,000	45
Georges Bank	8								
Cashes Bank	23	76,945	2,476	1,825	87	33,630	776	75	3
Fippenies Bank	2	8,090	667			4,325	155		
Middle Bank	2	1,750	61			760	19		
Platts Bank	122	210,511	11,526	3,765	207	92,873	2,928	805	32
Jeffreys Ledge	251	219,873	12,780			80,025	2,750		
Shore, general	1,109	1,386,730	66,118	3,270	149	231,304	6,835	940	37
Total	1,583	3,522,984	129,523	121,360	6,127	606,387	17,266	23,725	935
Grand total	7,475	42,645,926	1,585,874	2,000,582	98,896	15,727,174	418,657	756,631	29,508

Statement, by fishing grounds, of quantities and values of certain fishery product landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924—Continued

Fishing grounds	Cod—Continued				Haddock			
	Scrod (1 to 2½ pounds)				Large (over 2½ pounds)			
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Valu*
LANDED AT BOSTON								
East of 66° W. longitude								
La Have Bank	850	$17			471, 395	$16, 123		
Western Bank	2, 400	48			2, 250, 535	56, 612		
Cape Shore	3, 350	57			208, 860	8, 181		
West of 66° W. longitude								
Browns Bank	44, 395	1, 640			4, 819, 827	156, 093		
Georges Bank	4, 925	68			12, 372, 955	349, 876		
Cashes Bank	150	2			84, 280	3, 323		
Clark Bank					28, 600	1, 098		
Fippenies Bank					7, 500	198		
Middle Bank	5, 005	89			1, 242, 970	56, 244		
Jeffreys Ledge	26, 955	450			2, 956, 320	134, 020		
South Channel	71, 050	1, 011			25, 127, 169	814, 956		
Nantucket Shoals	490	7			5, 222, 820	151, 942		
Off Chatham	1, 870	29			820, 400	38, 350		
Seal Island					72, 500	1, 345		
Shore, general	14, 950	221			1, 432, 430	58, 773		
Total	176, 390	3, 639			57, 118, 561	1, 847, 134		
LANDED AT GLOUCESTER								
East of 66° W. longitude								
La Have Bank	1, 260	13	135	$4	87, 815	1, 104		
Western Bank	7, 215	54	29, 318	893	1, 229, 370	15, 456	78	$2
Quereau Bank			1, 380	41			150	4
Grand Bank					425	5	40	1
St. Peters Bank			25	1				
Cape Shore	690	6			6, 185	92		
West of 66° W. longitude								
Browns Bank	4, 275	33			318, 175	4, 360		
Georges Bank	2, 925	30	90	3	1, 228, 615	16, 158	55	1
South Channel	490	5			777, 810	13, 080		
Nantucket Shoals					274, 055	3, 602		
Shore, general	660	5	25	1	751, 171	30, 828		
Total	17, 515	146	30, 973	943	4, 673, 621	84, 685	323	8
LANDED AT PORTLAND								
East of 66° W. longitude								
La Have Bank	950	5			15, 450	219		
Western Bank	500	4	4, 540	111	3, 876, 233	75, 673	3, 095	62
West of 66° W. longitude								
Cashes Bank	6, 530	32			92, 085	3, 185		
Fippenies Bank	440	2			10, 820	418		
Middle Bank	300	2			20, 450	873		
Platts Bank	20, 415	107			360, 600	16, 369		
Jeffreys Ledge	24, 300	150			844, 056	40, 059		
Shore, general	35, 447	227	140	3	959, 376	40, 534		
Total	88, 882	529	4, 680	114	6, 179, 070	177, 330	3, 095	62
Grand total	282, 787	4, 314	35, 653	1, 057	67, 971, 252	2, 109, 149	3, 418	70

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924—Continued

Fishing grounds	Haddock—Continued				Hake			
	Scrod (1 to 2½ pounds)				Large (6 pounds and over)			
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON								
East of 66° W. longitude								
La Have Bank	2,000	$40						
Western Bank	55,300	825						
Grand Bank					1,000	$30		
Cape Shore	475	5						
West of 66° W. longitude								
Browns Bank	36,720	718			735	37		
Georges Bank	1,456,900	23,676			600	30		
Cashes Bank	9,515	142						
Middle Bank	226,750	4,936			26,990	1,267		
Jeffreys Ledge	600,440	12,646			134,440	5,363		
South Channel	6,350,335	109,312			404,805	11,848		
Nantucket Shoals	1,685,848	25,328			450	33		
Off Chatham	204,090	5,299			6,700	242		
Shore, general	395,375	7,600			12,947	253		
Total	11,023,748	190,527			588,667	19,103		
LANDED AT GLOUCESTER								
East of 66° W. longitude								
La Have Bank					9,595	117	575	$12
Western Bank					12,535	156	2,295	35
Quereau Bank					6,120	86	5,170	99
Green Bank					7,250	91	680	17
Grand Bank					16,640	296	5,240	90
St. Peters Bank					4,860	54	1,770	26
Cape Shore					2,210	33		
West of 66° W. longitude								
Browns Bank	795	6			7,315	83		
Georges Bank	38,815	356			39,060	452	4,370	70
South Channel	379,035	4,063			28,895	359		
Nantucket Shoals	46,775	496			5,500	69		
Shore, general	2,745	88			111,119	2,998	34	1
Total	468,165	5,009			251,099	4,794	20,134	350
LANDED AT PORTLAND								
East of 66° W. longitude								
Western Bank	8,650	66	1,365	$27	160	2		
St. Peters Bank					500	35		
West of 66° W. longitude								
Cashes Bank	14,430	72						
Fippenies Bank	1,315	7						
Middle Bank	2,715	19			1,120	45		
Platts Bank	72,690	518			8,125	212		
Jeffreys Ledge	184,957	1,738			1,035	56		
Shore, general	149,070	1,403			8,835	427		
Total	433,827	3,823	1,365	27	19,775	777		
Grand total	11,925,740	199,359	1,365	27	859,541	24,674	20,134	350

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924—Continued

Fishing grounds	Hake—Continued				Pollock			
	Small (under 6 pounds)							
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON								
East of 66° W. longitude								
La Have Bank	22,200	$520			7,560	$287		
Western Bank	10,360	244			170,050	6,564		
Quereau Bank	4,000	130						
Grand Bank	11,950	514						
St. Peters Bank	850	26						
Cape Shore	9,870	150			2,330	74		
West of 66° W. longitude								
Browns Bank	66,870	1,896			101,829	3,920		
Georges Bank	78,915	2,054			399,166	15,189		
Cashes Bank	65,675	1,209			12,743	353		
Clark Bank					930	37		
Fippenies Bank	4,780	67			3,170	55		
Middle Bank	360,161	9,208			57,700	2,047		
Jeffreys Ledge	813,190	23,058			142,510	4,537		
South Channel	3,269,424	78,622			931,384	37,431		
Nantucket Shoals	137,625	3,755			147,585	6,411		
Off Chatham	95,700	4,095			49,885	2,223		
Shore, general	158,457	3,808	1,150	$32	117,677	5,159		
Total	5,110,027	129,356	1,150	32	2,144,519	84,287		
LANDED AT GLOUCESTER								
East of 66° W. longitude								
La Have Bank					2,125	25	1,315	$25
Western Bank					83,345	1,096	2,375	41
Quereau Bank					660	6	760	16
Green Bank							360	9
Grand Bank							795	16
St. Peters Bank							50	1
Cape Shore					880	9		
West of 66° W. longitude								
Browns Bank					20,715	239	765	14
Georges Bank					33,335	377	4,970	92
South Channel					4,520	57		
Nantucket Shoals					1,245	16		
Shore, general					2,142,768	58,815		
Total					2,289,593	60,640	11,390	214
LANDED AT PORTLAND								
East of 66° W. longitude								
La Have Bank	2,570	30			300	4		
Western Bank	5,335	74			181,275	2,463	6,555	109
Quereau Bank	5,000	63					85	2
St. Peters Bank	600	6						
West of 66° W. longitude								
Cashes Bank	62,935	1,399	430	9	19,820	375		
Fippenies Bank	6,525	202			615	12		
Middle Bank	4,490	62			255	7		
Platts Bank	537,007	11,252			35,463	833	310	7
Jeffreys Ledge	313,546	9,599			95,762	2,792		
Shore, general	355,161	8,990	160	3	299,336	7,693		
Total	1,293,169	31,677	590	12	632,826	14,179	6,950	118
Grand total	6,403,196	161,033	1,740	44	5,066,938	159,106	18,340	332

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924—Continued

Fishing grounds	Cusk				Halibut			
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON								
East of 66° W. longitude								
La Have Bank	59,935	$1,184			167,282	$34,075		
Western Bank	6,525	130			283,306	49,976		
Quereau Bank	3,735	114			959,096	141,427		
Green Bank					116,533	22,358		
Grand Bank	4,435	89			712,572	117,975		
St. Peters Bank	700	14			358,787	58,369		
Burgeo Bank					32,186	5,992		
Cape Shore	34,950	554			2,191	503		
The Gully					51,386	9,333		
Labrador Coast					13,429	1,296		
West of 66° W. longitude								
Browns Bank	366,161	6,521			280,561	60,815		
Georges Bank	109,450	2,177			766,116	159,566		
Cashes Bank	85,595	1,449			1,246	382		
Clark Bank					817	613		
Fippenies Bank	14,455	265			278	42		
Middle Bank	192,520	3,935			5,145	1,551		
Jeffreys Ledge	425,842	9,982			7,173	1,972		
South Channel	473,198	10,270			161,322	41,726		
Nantucket Shoals	12,480	227			6,024	1,390		
Off Chatham	18,080	584			3,076	955		
Seal Island	4,115	57			120	36		
Shore, general	48,400	891			5,981	1,094		
Total	1,860,576	38,443			3,934,627	711,946		
LANDED AT GLOUCESTER								
East of 66° W. longitude								
La Have Bank	45,170	707	1,260	$20				
Western Bank	110,920	1,772	10,650	219	10,475	943	340	$34
Quereau Bank	77,415	1,313	9,010	217				
Green Bank	140	3						
Grand Bank	31,320	339	6,135	138			105	13
St. Peters Bank	2,250	28	4,160	67			85	11
Cape Shore	15,230	194						
West of 66° W. longitude								
Browns Bank	120,740	1,827	3,765	84				
Georges Bank	232,845	3,948	20,535	564	130	11		
Cashes Bank	16,000	299						
South Channel	14,775	202						
Shore, general	24,590	377						
Total	691,395	11,009	55,515	1,309	10,605	954	530	58
LANDED AT PORTLAND								
East of 66° W. longitude								
La Have Bank	7,475	105			13,583	2,140		
Western Bank	9,635	135	4,870	131	64,215	12,737		
Quereau Bank	18,000	263			83,210	15,168		
Green Bank					23,553	4,306		
Grand Bank					24,563	3,169		
St. Peters Bank	1,670	28			75,588	8,969		
Burgeo Bank					29,880	4,820		
Gulf of St. Lawrence					7,937	1,166		
St. Anns Bank					34,072	6,284		
The Gully	4,440	67			33,859	3,926		
West of 66° W. longitude								
Browns Bank	1,900	29			60,641	9,869		
Georges Bank	3,060	69			7,709	1,291		
Cashes Bank	80,945	1,191	300	6	4,032	636		
Fippenies Bank	1,920	38			45	10		
Middle Bank	1,370	26			6	1		
Platts Bank	234,495	4,438	775	16	6,244	1,071		
Jeffreys Ledge	183,516	4,718	125	1	3,253	574		
Shore, general	243,609	6,092			3,994	514		
Total	792,035	17,199	6,070	154	476,384	76,651		
Grand total	3,344,006	66,651	61,585	1,463	4,421,616	789,551	530	58

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924—Continued

Fishing grounds	Mackerel				Miscellaneous			
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON								
East of 66° W. longitude								
La Have Bank					6,158	$1,472		
Western Bank					37,942	1,600		
Quereau Bank					5,004	1,181		
Grand Bank					8,318	1,702		
St. Peters Bank					711	158		
Off Newfoundland							180,000	$4,500
Cape Shore	796,413	$48,707	12,000	$1,120	110,129	28,249		
West of 66° W. longitude								
Browns Bank					51,456	6,781		
Georges Bank	22,144	3,632			1,977,118	390,051		
Cashes Bank	38,090	2,059			100	10		
Tillies Bank	100,255	5,921						
Middle Bank	1,834,214	66,545	40,500	2,560	21,186	915		
Jeffreys Ledge	271,916	32,519	8,700	856	198,446	9,327		
South Channel	676,352	34,417	4,400	242	1,085,664	64,502		
Nantucket Shoals	84,370	4,085			303,629	19,708		
Off Chatham	675,288	25,082	38,800	2,329	91,291	5,487		
Shore, general	1,682,397	114,966	32,670	2,876	2,742,612	98,042		
Total	6,181,439	337,933	137,070	9,983	6,639,764	629,185	180,000	4,500
LANDED AT GLOUCESTER								
East of 66° W. longitude								
Off Newfoundland							2,763,480	103,871
Cape Shore			62,700	4,389				
West of 66° W. longitude								
Middle Bank	142,650	2,982	303,800	17,796	13,000	98		
South Channel	84,560	1,692	55,540	2,847				
Shore, general	1,608,651	86,419	683,084	55,362	621,458	12,339		
Total	1,835,861	91,093	1,105,124	80,394	634,458	12,437	2,763,480	103,871
LANDED AT PORTLAND								
East of 66° W. longitude								
La Have Bank					20,222	4,678		
Western Bank					8,412	400		
Burgeo Bank					170	10		
Cape Shore	106,630	4,244			42,763	10,835		
West of 66° W. longitude								
Browns Bank					1,173	229		
Georges Bank					85,114	16,790		
Cashes Bank					59	2		
Middle Bank					250	13		
Platts Bank					572	31		
Jeffreys Ledge					6,653	345		
Shore, general	350,392	17,053	40,993	1,084	1,259,441	17,669		
Total	457,022	21,297	40,993	1,084	1,424,829	51,002		
Grand total	8,474,322	450,323	1,283,187	91,461	8,699,051	692,624	2,943,480	108,371

NOTE.—The items under "Miscellaneous" include bluebacks, 106,000 pounds, value $823; butterfish, 29,741 pounds, value $5,134; flounders, 4,335,227 pounds, value $191,515; herring, fresh, 1,467,256 pounds, value $19,496; herring, salted, 2,943,480 pounds, value $108,371; rosefish, 76,695 pounds, value $1,630; salmon, 23 pounds, value $5; shad, 178,659 pounds, value $3,802; sharks, 7,507 pounds, value $223; skates, 21,210 pounds; value $356; smelt, 3,554 pounds, value $475; sturgeon, 1,369 pounds, value $302; swordfish, 2,023,416 pounds, value $449,837; tuna, 2,088 pounds, value $103; wolf fish, 223,037 pounds, value $5,743; lobster, 30 pounds, value $8; scallops, 308 pounds, value $129; livers, 6,049 pounds, value $139; spawn, 216,792 pounds, value $12,900; and tongues, 90 pounds, value $4. In this report vessels include only craft of 5 net tons and upward.

Statement, by fishing grounds, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the calendar year 1924—Continued

Fishing grounds	Total				Grand total	
	Fresh		Salted			
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON						
East of 66° W. longitude						
La Have Bank	1,231,017	$77,695			1,231,017	$77,695
Western Bank	5,536,115	221,505	11,000	$358	5,547,115	221,863
Quereau Bank	1,004,085	144,014	6,000	255	1,010,085	144,269
Green Bank	116,533	22,358			116,533	22,358
Grand Bank	757,205	121,200			757,205	121,200
St. Peters Bank	366,248	58,742			366,248	58,742
Burgeo Bank	32,186	5,992			32,186	5,992
Off Newfoundland			180,000	4,500	180,000	4,500
Cape Shore	1,513,793	102,556	12,000	1,120	1,525,793	103,676
The Gully	51,386	9,833			51,386	9,833
Labrador Coast	13,429	1,296			13,429	1,296
West of 66° W. longitude						
Browns Bank	10,067,654	397,192			10,067,654	397,192
Georges Bank	33,018,102	1,480,416			33,018,102	1,480,416
Cashes Bank	432,304	15,329			432,304	15,329
Clark Bank	37,147	2,276			37,147	2,276
Fippenies Bank	71,713	2,734			71,713	2,734
Tillies Bank	100,255	5,921			100,255	5,921
Middle Bank	4,246,084	162,851	40,500	2,560	4,286,584	165,411
Jeffreys Ledge	6,205,775	276,114	8,700	856	6,214,475	276,970
South Channel	49,950,900	1,573,213	4,400	242	46,955,300	1,573,455
Nantucket Shoals	8,853,435	271,828			8,853,435	271,828
Off Chatham	2,177,386	91,952	38,800	2,329	2,216,186	94,281
Seal Island	113,835	2,683			113,835	2,683
Shore, general	7,734,449	338,762	33,820	2,908	7,768,269	341,670
Total	130,631,036	5,386,462	335,220	15,128	130,966,256	5,401,590
LANDED AT GLOUCESTER						
East of 66° W. longitude						
La Have Bank	591,535	12,439	138,157	6,714	729,692	19,153
Western Bank	10,272,916	209,420	1,172,648	52,148	11,445,564	261,568
Quereau Bank	138,695	3,231	289,625	13,194	428,320	16,425
Green Bank	7,390	94	35,830	1,871	43,220	1,965
Grand Bank	92,450	1,655	282,249	12,730	374,699	14,385
St. Peters Bank	19,170	350	185,275	8,671	204,445	9,021
Off Newfoundland			2,763,480	103,871	2,763,480	103,871
Cape Shore	165,095	3,124	62,700	4,389	227,795	7,513
Labrador Coast			4,875	242	4,875	242
West of 66° W. longitude						
Browns Bank	1,426,980	26,113	83,305	3,915	1,510,285	30,028
Georges Bank	6,781,835	135,669	519,890	24,034	7,301,725	159,703
Cashes Bank	16,000	299			16,000	299
Middle Bank	155,650	3,080	303,800	17,796	459,450	20,876
South Channel	1,483,865	23,399	55,540	2,847	1,539,405	26,246
Nantucket Shoals	339,510	4,416			339,510	4,416
Shore, general	7,772,232	310,311	685,223	55,454	8,457,455	365,765
Total	29,263,323	733,600	6,582,597	307,876	35,845,920	1,041,476
LANDED AT PORTLAND						
East of 66° W. longitude						
La Have Bank	85,930	7,878	14,700	638	100,630	8,516
Western Bank	5,889,035	129,956	114,535	5,136	6,003,570	135,092
Quereau Bank	106,210	15,494	10,745	531	116,955	16,025
Green Bank	23,553	4,306			23,553	4,306
Grand Bank	24,563	3,169			24,563	3,169
St. Peters Bank	88,033	9,343	5,300	207	93,333	9,550
Burgeo Bank	30,050	4,830			30,050	4,830
Cape Shore	149,393	15,079			149,393	15,079
Gulf of St. Lawrence	7,937	1,166			7,937	1,169
St. Anns Bank	34,072	6,284			34,072	6,284
The Gully	40,799	4,056			40,799	4,056
West of 66° W. longitude						
Browns Bank	74,094	10,358	9,635	477	83,729	10,835
Georges Bank	95,883	18,150			95,883	18,150
Cashes Bank	391,411	10,144	2,630	105	394,041	10,249
Fippenies Bank	34,095	1,511			34,095	1,511
Middle Bank	33,466	1,128			33,466	1,128
Platts Bank	1,578,995	49,285	5,655	262	1,584,650	49,547
Jeffreys Ledge	1,956,976	75,561	125	1	1,957,101	75,562
Shore, general	5,282,695	173,555	45,503	1,276	5,328,198	174,831
Total	15,927,190	541,253	208,828	8,633	16,136,018	549,886
Grand total	175,821,549	6,661,315	7,126,645	331,637	182,948,194	6,992,952

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the year 1924

Month	Number of trips	Cod							
		Large (10 pounds and over)				Market (under 10 and over 2½ pounds)			
		Fresh		Salted		Fresh		Salted	
		Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON									
January	280	1,246,265	$88,621			565,865	$26,270		
February	299	3,895,864	114,602			728,575	20,884		
March	297	3,270,788	121,099			531,930	20,325		
April	245	2,071,026	67,248			791,250	19,520		
May	233	1,920,940	65,076			1,047,385	24,722		
June	304	1,907,795	86,377	6,000	$255	1,168,801	31,393		
July	355	1,686,423	78,440			1,193,095	30,477		
August	372	2,075,949	72,948			1,245,580	26,759		
September	370	2,561,518	106,909			1,282,328	33,019		
October	353	2,190,750	111,100			1,014,410	32,015		
November	311	883,686	65,151	11,000	358	537,500	23,332		
December	316	1,182,288	92,871			852,707	35,751		
Total	3,735	24,893,292	1,070,442	17,000	613	10,959,426	324,467		
LANDED AT GLOUCESTER									
January	45	44,895	4,154			19,275	313		
February	115	1,943,290	47,977	4,520	215	67,140	1,158	45	$2
March	202	1,640,545	49,425	8,655	393	75,225	1,307	1,895	66
April	261	1,421,140	44,134	102,561	4,569	202,710	3,481	18,900	661
May	205	1,489,720	37,990	219,228	9,867	463,781	8,307	51,237	1,805
June	171	1,450,215	35,937	372,675	18,106	787,520	14,851	395,522	15,263
July	175	2,784,720	64,833	338,905	16,363	1,211,950	21,645	99,372	3,719
August	116	2,201,595	51,868	240,993	12,133	895,795	17,193	40,445	1,574
September	236	891,960	28,077	396,585	20,715	301,090	5,832	100,250	4,337
October	206	167,020	4,727	156,955	8,579	99,675	1,982	21,660	976
November	274	69,410	4,167	21,145	1,216	34,490	797	3,580	170
December	151	125,140	12,620			2,710	58		
Total	2,157	14,229,650	385,909	1,862,222	92,156	4,161,361	76,924	732,906	28,573
LANDED AT PORTLAND									
January	116	134,625	9,380			62,320	2,497		
February	113	120,685	4,509	3,065	92	44,785	1,580		
March	132	762,703	19,325	2,660	133	63,475	2,009	1,915	77
April	139	565,714	11,912	16,565	734	53,504	1,165	4,900	184
May	103	318,056	8,904	1,475	70	21,441	491	395	14
June	167	348,670	16,970	15,390	749	28,331	662	3,510	113
July	191	278,822	14,323	7,580	379	23,562	683	1,280	51
August	174	203,913	9,524	200	10	17,012	444		
September	112	246,930	8,901	28,155	1,345	58,015	1,207	6,970	285
October	135	210,271	8,404	44,530	2,537	86,596	2,235	4,240	190
November	112	238,054	10,495	1,740	78	97,468	2,538	515	21
December	89	94,541	6,876			49,878	1,755		
Total	1,583	3,522,984	129,523	121,360	6,127	606,387	17,266	23,725	935
Grand total	7,475	42,645,926	1,585,874	2,000,582	98,896	15,727,174	418,657	756,631	29,508
Grounds east of 66° W. long.	548	10,863,004	305,298	1,508,609	74,470	4,039,261	88,270	657,564	25,731
Grounds west of 66° W. long.	6,927	31,782,922	1,280,576	491,973	24,426	11,687,913	330,387	99,067	3,777
Landed at Boston in 1923	3,368	23,514,769	1,063,881	29,940	1,253	14,367,255	379,712		
Landed at Gloucester in 1923	1,579	9,642,130	278,467	2,652,059	126,698	6,148,642	111,398	1,282,491	49,377
Landed at Portland in 1923	1,588	3,406,136	124,369	295,646	14,521	847,222	25,906	54,325	2,112

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the year 1924—Continued

Months	Cod—Continued				Haddock			
	Scrod (1 to 2½ pounds)				Large (over 2½ pounds)			
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON								
January	28,105	$606			4,723,300	$233,849		
February	6,210	81			6,580,140	193,580		
March	5,050	90			6,374,855	241,363		
April	9,300	115			4,640,749	125,084		
May	4,215	43			3,898,015	113,418		
June	2,940	38			3,586,565	93,663		
July	6,105	55			3,366,552	73,833		
August	1,805	13			2,907,200	73,342		
September	1,960	16			4,746,030	122,979		
October	57,320	765			5,705,005	174,911		
November	7,005	105			4,947,315	157,965		
December	46,375	1,712			5,642,835	243,147		
Total	176,390	3,639			57,118,561	1,847,134		
LANDED AT GLOUCESTER								
January	3,300	25			5,155	180		
February					201,616	3,445		
March					161,535	3,208		
April	1,680	13	285	$7	1,213,115	27,325		
May	3,990	30	25	1	907,170	17,594		
June	1,365	11	26,193	786	631,060	9,187	173	$4
July	2,650	21	295	7	590,250	7,353	150	4
August	1,270	13	90	3	371,465	5,032		
September	1,430	15	3,035	106	239,180	2,957		
October	200	2	1,050	33	133,790	4,781		
November	1,630	16			204,885	3,407		
December					14,400	216		
Total	17,515	146	30,973	943	4,673,621	84,685	323	8
LANDED AT PORTLAND								
January	10,455	67			327,944	19,663		
February	8,628	63			419,113	15,900		
March	6,235	61	200	6	1,526,927	36,421		
April	7,305	39	3,460	87	1,716,064	34,473		
May	4,350	22			572,620	12,304		
June	6,572	33	140	3	118,510	4,261		
July	555	3			100,552	2,897		
August	2,320	13			100,437	4,604		
September	5,305	26			151,041	5,493	2,525	51
October	16,460	87			364,356	13,170		
November	10,650	54	880	18	423,630	12,295	570	11
December	10,047	61			357,876	15,849		
Total	88,882	529	4,680	114	6,179,070	177,330	3,095	62
Grand total	282,787	4,314	35,653	1,057	67,971,252	2,109,149	3,418	70
Grounds east of 66° W. long	17,215	204	35,398	1,050	8,146,268	173,465	3,363	69
Grounds west of 66° W. long	265,572	4,110	255	7	59,824,984	1,935,684	55	1
Landed at Boston in 1923	130,155	1,837			56,124,378	2,052,121		
Landed at Gloucester in 1923	34,115	262	108,895	3,219	7,711,991	98,411	41,610	922
Landed at Portland in 1923	121,436	698	20,058	431	5,037,849	177,242		

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the year 1924—Continued

Months	Haddock—Continued				Hake			
	Scrod (1 to 1½ pounds)				Large (6 pounds and over)			
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON								
January	1,175,570	$35,274			24,525	$1,284		
February	1,094,260	16,904			5,250	215		
March	843,790	25,107			3,155	165		
April	727,480	10,417			12,850	649		
May	708,680	9,822			4,935	205		
June	740,265	7,578			6,350	317		
July	472,248	4,323			166,855	3,852		
August	495,255	5,306			2,570	59		
September	993,285	11,353			1,727	34		
October	1,281,265	16,423			65,375	1,251		
November	1,125,865	17,187			75,020	1,477		
December	1,366,785	30,833			220,055	9,595		
Total	11,023,748	190,527			588,667	19,103		
LANDED AT GLOUCESTER								
January					7,700	420		
February	6,015	38			10,280	513	55	$1
March	1,525	76			2,410	111		
April	795	6			3,645	37	1,430	21
May	10,380	78			1,940	20	324	5
June	38,770	388			25,130	314	2,655	41
July	56,920	549			21,714	403	4,315	68
August	63,655	555			39,475	464	3,765	75
September					31,845	476	3,215	53
October	277,685	3,167			59,035	882	2,975	51
November	12,420	152			37,355	704	1,400	35
December					10,570	450		
Total	468,165	5,009			251,099	4,794	20,134	350
LANDED AT PORTLAND								
January	47,281	644			3,300	132		
February	48,724	794			5,195	314		
March	33,555	516			1,120	45		
April	9,938	88			55	2		
May	7,160	47			1,015	30		
June	22,671	137						
July	18,760	94			555	36		
August	22,193	119			200	3		
September	21,230	136	1,365	$27	50	1		
October	50,160	262			560	5		
November	82,796	470			4,400	76		
December	69,359	516			3,325	133		
Total	433,827	3,823	1,365	27	19,775	777		
Grand total	11,925,740	199,359	1,365	27	859,541	24,674	20,134	350
Grounds east of 66° W. long	66,425	936	1,365	27	60,870	900	15,730	279
Grounds west of 66° W. long	11,859,315	198,423			798,671	23,774	4,404	71
Landed at Boston in 1923	4,416,268	90,726	1,975	35	122,644	6,062		
Landed at Gloucester in 1923	100,585	670			571,985	8,747	16,255	284
Landed at Portland in 1923	326,867	3,050			38,795	806	1,184	25

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the year 1924—Continued

Months	Hake—Continued				Pollock			
	Small (under 6 pounds)							
	Fresh		Salted		Fresh		Salted	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON								
January	435,081	$17,229			198,052	$9,896		
February	324,305	13,500			117,916	6,203		
March	334,270	12,881			77,427	4,606		
April	190,625	8,539			95,535	4,792		
May	74,435	2,741			105,580	4,351		
June	182,060	4,735	150	$7	129,752	5,420		
July	33,200	850			109,499	4,888		
August	159,650	3,557			158,008	6,685		
September	712,586	14,080			256,483	7,776		
October	1,221,540	19,564	1,000	25	241,428	6,207		
November	1,000,805	17,638			251,075	6,815		
December	441,470	14,042			403,764	16,648		
Total	5,110,027	129,356	1,150	32	2,144,519	84,287		
LANDED AT GLOUCESTER								
January					67,230	4,035		
February					21,752	879		
March					9,080	424	600	$9
April					35,355	1,572	980	15
May					10,923	110	920	16
June					21,965	237	50	1
July					42,023	585	3,355	65
August					22,810	450	1,010	20
September					154,890	3,507	2,615	43
October					879,840	18,260	1,860	45
November					853,410	20,658		
December					170,315	9,923		
Total					2,289,593	60,640	11,390	214
LANDED AT PORTLAND								
January	177,509	6,135			63,018	2,010		
February	87,323	3,904			45,973	1,649		
March	37,458	1,460			70,186	1,488	6,000	98
April	70,178	2,252			100,164	1,008		
May	54,559	1,358			25,872	336	60	1
June	35,874	621	590	12	52,638	1,445		
July	71,284	994			67,854	1,607	85	2
August	24,830	338			46,699	1,256		
September	27,564	628			54,406	1,194		
October	319,490	5,370			47,788	921	695	15
November	260,935	4,494			40,202	704	110	2
December	126,165	4,123			18,026	561		
Total	1,293,169	31,677	590	12	632,826	14,179	6,950	118
Grand total	6,403,196	161,033	1,740	44	5,066,938	159,106	18,340	332
Grounds east of 66° W. long	72,735	1,757			448,525	10,528	12,295	219
Grounds west of 66° W. long	6,330,461	159,276	1,740	44	4,618,413	148,578	6,045	113
Landed at Boston in 1923	4,377,145	92,001	1,500	24	3,076,671	104,125		
Landed at Gloucester in 1923					1,122,362	35,392	36,345	764
Landed at Portland in 1923	1,204,841	34,350	3,428	68	566,608	11,860	2,340	48

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the year 1924—Continued

Months	Cusk				Halibut			
	Fresh		Salted		Fresh		Salted	
LANDED IN BOSTON	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
January	122,565	$3,503			30,214	$10,267		
February	100,215	3,429			60,073	16,087		
March	215,085	5,450			234,752	44,325		
April	237,615	4,127			487,000	89,916		
May	128,153	1,991			681,147	127,155		
June	64,335	967			495,963	86,250		
July	38,545	815			489,390	81,450		
August	31,370	590			723,911	97,498		
September	98,330	1,776			503,564	104,080		
October	222,640	4,030			165,972	35,787		
November	279,515	4,602			43,438	11,379		
December	322,208	7,163			19,203	7,752		
Total	1,860,576	38,443			3,934,627	711,946		
LANDED AT GLOUCESTER								
January	1,200	15						
February	450	14	55	$1				
March	1,920	48						
April	38,230	500	1,430	23				
May	118,620	1,729	3,730	84			105	$13
June	26,570	406	3,780	84			340	34
July	110,115	1,960	8,095	166			85	11
August	160,580	2,367	22,315	535	10,605	954		
September	93,195	1,499	9,685	230				
October	115,300	2,027	6,380	185				
November	24,735	437	45	1				
December	480	7						
Total	691,395	11,009	55,515	1,309	10,605	954	530	58
LANDED AT PORTLAND								
January	83,665	2,429			1,850	353		
February	99,197	2,882			1,087	210		
March	69,660	1,873	125	1	3,999	660		
April	134,560	2,176			86,091	12,154		
May	44,490	805	600	12	60,377	10,099		
June	8,521	201	300	6	128,166	19,099		
July	26,819	454			90,522	12,993		
August	13,213	270			21,235	3,212		
September	23,056	512	3,630	100	25,541	6,298		
October	139,065	2,210	1,415	35	54,567	11,140		
November	85,796	1,658			1,687	266		
December	63,993	1,729			1,262	167		
Total	792,035	17,199	6,070	154	476,384	76,651		
Grand total	3,344,006	66,651	61,585	1,463	4,421,616	789,551	530	58
Grounds east of 66° W. long	433,945	7,039	36,085	792	3,097,703	505,432	530	58
Grounds west of 66° W long	2,910,061	59,612	25,500	671	1,323,913	284,119		
Landed at Boston in 1923	1,516,969	31,408	23,000	690	3,560,375	679,259		
Landed at Gloucester in 1923	290,110	3,545	37,570	743	106,884	22,113	1,510	108
Landed at Portland in 1923	1,103,817	24,667	726,740	675	1,205,735	221,174		

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the year 1924—Continued

Months	Mackerel				Miscellaneous [1]			
	Fresh		Salted		Fresh		Salted	
LANDED AT BOSTON	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
January					293,118	$20,727		
February					461,737	23,099		
March					522,961	23,572		
April					569,448	19,030		
May	79,986	$12,376			444,165	13,830	180,000	$4,500
June	1,300,619	90,839	12,000	$1,120	374,246	50,051		
July	1,122,907	48,413	33,800	1,916	1,524,751	224,409		
August	2,034,589	70,727	77,300	5,352	851,657	138,323		
September	1,172,312	69,348	13,970	1,595	573,584	55,409		
October	350,866	28,449			413,962	23,128		
November	120,160	17,781			313,088	17,912		
December					297,047	19,695		
Total	6,181,439	337,933	137,070	9,983	6,639,764	629,185	180,000	4,500
LANDED AT GLOUCESTER								
January							248,000	10,688
February							529,080	17,830
May	1,380	179						
June	48,162	4,722	62,700	4,389	232,400	3,474		
July	481,087	11,372	153,034	8,341	106,200	1,758		
August	199,308	3,600	407,960	25,503	68,800	660		
September	734,054	32,805	395,600	32,821	56,000	840		
October	202,434	12,703	25,000	2,197	44,000	610		
November	153,791	22,784	60,830	7,143	2,080	42		
December	15,645	2,928			124,978	5,053	1,986,400	75,353
Total	1,835,861	91,093	1,105,124	80,394	634,458	12,437	2,763,480	103,871
LANDED AT PORTLAND								
January					3,119	184		
February					14,221	454		
March					32,829	533		
April					1,857	75		
May					855	33		
June	78,684	5,358			70,744	929		
July	33,521	604	2,400	24	494,683	15,084		
August	198,529	9,405	38,435	1,052	498,036	20,773		
September	128,304	3,919			61,941	9,900		
October	15,750	1,654	158	8	162,513	2,044		
November	2,234	357			82,092	967		
December					939	26		
Total	457,022	21,297	40,993	1,084	1,424,829	51,002		
Grand total	8,474,322	450,323	1,283,187	91,461	8,699,051	692,624	2,943,480	108,371
Grounds east of 66° W. long	903,043	52,951	74,700	5,509	239,829	50,285	2,943,480	108,371
Grounds west of 66° W. long	7,571,279	397,372	1,208,487	85,952	8,459,222	642,339		
Landed at Boston in 1923	6,580,066	316,489	187,600	12,719	6,175,724	601,131	8,600	258
Landed at Gloucester in 1923	3,187,263	85,424	621,800	38,834	95,946	4,500	1,219,300	40,861
Landed at Portland in 1923	917,094	31,882	71,405	2,289	445,061	30,511		

[1] Includes herring from Newfoundland, 2,943,480 pounds salted, value $108,371.

Statement, by months, of quantities and values of certain fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by American fishing vessels during the year 1924—Continued

Months	Total				Grand total	
	Fresh		Salted			
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
LANDED AT BOSTON						
January	8,842,660	$447,526			8,842,660	$447,526
February	13,374,545	408,584			13,374,545	408,584
March	12,414,063	498,983			12,414,063	498,983
April	9,832,878	349,437			9,832,878	349,437
May	9,097,636	375,730	180,000	$4,500	9,277,636	380,230
June	9,959,691	457,628	18,150	1,382	9,977,841	459,010
July	10,209,570	551,805	33,800	1,916	10,243,370	553,721
August	10,686,544	495,807	77,300	5,352	10,763,844	501,159
September	12,903,707	526,779	13,970	1,595	12,917,677	528,374
October	12,930,533	453,630	1,000	25	12,931,533	453,655
November	9,584,472	341,344	11,000	358	9,595,472	341,702
December	10,794,737	479,209			10,794,737	479,209
Total	130,631,036	5,386,462	335,220	15,128	130,966,256	5,401,590
LANDED AT GLOUCESTER						
January	148,755	9,142	248,000	10,688	396,755	19,830
February	2,250,543	54,024	533,755	18,049	2,784,298	72,073
March	1,892,240	54,599	11,150	468	1,903,390	55,067
April	2,916,670	77,068	125,586	5,296	3,042,256	82,364
May	3,007,904	66,037	275,569	11,791	3,283,473	77,828
June	3,263,157	69,527	864,088	38,708	4,127,245	108,235
July	5,407,629	110,479	607,606	28,744	6,015,235	139,223
August	4,035,358	83,156	716,578	39,843	4,751,936	122,999
September	2,503,644	76,008	910,985	58,305	3,414,629	134,313
October	1,978,979	49,141	215,880	12,066	2,194,859	61,207
November	1,394,206	53,164	87,000	8,565	1,481,206	61,729
December	464,238	31,255	1,986,400	75,353	2,450,638	106,600
Total	29,263,323	733,600	6,582,597	307,876	35,845,920	1,041,476
LANDED AT PORTLAND						
January	915,086	43,494			915,086	43,494
February	894,931	32,259	3,065	92	897,996	32,351
March	2,609,147	64,391	10,900	315	2,620,047	64,706
April	2,745,430	65,344	24,925	1,005	2,770,355	66,349
May	1,110,795	34,429	2,530	97	1,113,325	34,526
June	899,381	49,716	19,930	883	919,311	50,599
July	1,207,489	49,772	11,345	456	1,218,834	50,228
August	1,148,617	49,961	38,635	1,062	1,187,252	51,023
September	803,383	38,215	42,645	1,808	846,028	40,023
October	1,467,576	47,502	51,038	2,785	1,518,614	50,287
November	1,329,944	34,374	3,815	130	1,333,759	34,504
December	795,411	31,796			795,411	31,796
Total	15,927,190	541,253	208,828	8,633	16,136,018	549,886
Grand total	175,821,549	6,661,315	7,126,645	331,637	182,948,194	6,992,952
Grounds east of 66° W. long	28,388,823	1,197,065	5,289,119	216,575	33,677,942	1,413,640
Grounds west of 66° W. long	147,432,726	5,464,250	1,837,526	115,062	149,270,252	5,579,312
Landed at Boston in 1923	123,962,419	5,418,752	252,615	14,979	124,215,034	5,433,731
Landed at Gloucester in 1923	29,012,013	648,929	6,017,835	261,810	35,029,848	910,739
Landed at Portland in 1923	15,221,461	686,515	475,126	20,169	15,696,587	706,684

The fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by fishing vessels each year are taken chiefly from fishing grounds off the coast of the United States. In the calendar year 1924, 81.53 per cent of the quantity and 79.75 per cent of the value landed by fishing vessels were from these grounds; 2.75 per cent of the quantity and 5.22 per cent of the value, consisting principally of cod, halibut, and herring, were from fishing banks off the coast of Newfoundland; and 15.72 per cent of the quantity and 15.03 per cent of the value were from fishing grounds off the Canadian Provinces. There was some increase, compared with the previous year, in the percentage of products from grounds off the coast of the United States and a decrease in the percentage from grounds off the Canadian Provinces. There was very little change in the percentage from off the coast of Newfoundland. Newfoundland herring constituted 1.61 per cent of the quantity and 1.55 per cent of the value of the fishery products landed at these ports during the year. The herring were taken from the treaty coast of Newfoundland, and the cod, haddock, hake, halibut, and other species from that region were obtained from fishing banks on the high seas. All fish caught by American fishing vessels off the coast of the Canadian Provinces were from offshore fishing grounds. The catch from each of these regions is given in the following table:

Quantity and value of fish landed by American fishing vessels at Boston and Gloucester, Mass., and Portland, Me., in 1924, from fishing grounds off the coasts of the United States, Newfoundland, and Canadian Provinces

Species	United States		Newfoundland		Canadian Provinces		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod:								
Fresh	43,699,307	$1,613,828	89,930	$2,653	14,866,650	$392,364	58,655,887	$2,008,845
Salted	591,295	28,210	494,109	23,332	1,707,462	77,919	2,792,866	129,461
Haddock:								
Fresh	71,611,799	2,132,762	425	5	8,284,768	175,741	79,896,992	2,308,508
Salted	55	1	40	1	4,688	95	4,783	97
Hake:								
Fresh	7,129,132	183,050	43,650	1,052	89,955	1,605	7,262,737	185,707
Salted	6,144	115	7,690	133	8,040	146	21,874	394
Pollock:								
Fresh	4,618,413	148,578			448,525	10,528	5,066,938	159,106
Salted	6,045	113	1,205	26	11,090	193	18,340	332
Cusk:								
Fresh	2,905,946	59,555	40,515	501	397,545	6,595	3,344,006	66,651
Salted	25,500	671	10,295	205	25,790	587	61,585	1,463
Halibut:								
Fresh	1,323,793	284,083	1,387,091	227,254	1,710,732	278,214	4,421,616	789,551
Salted			190	24	340	34	530	58
Mackerel:								
Fresh	7,571,279	397,372			903,043	52,951	8,474,322	450,323
Salted	1,208,487	85,952			74,700	5,509	1,283,187	91,461
Herring:								
Fresh	1,467,256	19,496					1,467,256	19,496
Salted			2,943,480	108,371			2,943,480	108,371
Swordfish: Fresh	1,825,742	400,636	9,029	1,860	188,645	47,341	2,023,416	449,837
Miscellaneous: Fresh	5,166,224	222,207	170	10	41,985	1,074	5,208,379	223,291
Total	149,156,417	5,576,629	5,027,819	365,427	28,763,958	1,050,896	182,948,194	6,992,952

SPECIES

COD

In 1924 there was an increase of 37 vessels, or 12.09 per cent, in the fishing fleet landing fish at Boston, Gloucester, and Portland, as compared with 1923. There were 5 vessels in the salt-bank fishery and 102 in the market fishery. These vessels landed their fares of

cod and other ground fish at the above-named ports during the year, and large quantities were also landed by vessels fishing on the shore grounds. The catch of cod landed at these ports during the year was 61,448,753 pounds, valued at $2,138,306, of which 58,655,887 pounds, valued at $2,008,845, were landed fresh and 2,792,866 pounds, valued at $129,461, were landed salted. Cod ranked second in both quantity and value among the various species landed.

HADDOCK

Haddock ranked first in both quantity and value, the catch exceeding that of cod by 18,453,022 pounds in quantity and $170,299 in value. The quantity of haddock landed at these ports by fishing vessels during the year was 79,901,775 pounds, valued at $2,308,605, all landed fresh except 4,783 pounds, valued at $97, landed salted. These fish were taken chiefly from Western Bank, Browns Bank, Georges Bank, South Channel, and Nantucket Shoals, and about 44 per cent of the quantity and 38 per cent of the value were taken in the otter-trawl fishery. The greater part of the catch (68,142,309 pounds, valued at $2,037,661) was landed at Boston.

HAKE

The catch of hake amounted to 7,284,611 pounds, valued at $186,101, all landed fresh except 21,874 pounds, valued at $394, landed salted. Of this catch 5,699,844 pounds, valued at $148,491, were landed at Boston; 271,233 pounds, valued at $5,144, at Gloucester; and 1,313,534 pounds, valued at $32,466, at Portland. About half of the catch was taken in South Channel, and about 78 per cent was landed at Boston.

POLLOCK

The catch of pollock amounted to 5,085,278 pounds, valued at $159,438, all landed fresh except 18,340 pounds salted, valued at $332. The catch was obtained largely from Georges Bank, South Channel, and the shore grounds, and most of it was landed at Boston and Gloucester.

CUSK

The catch of cusk amounted to 3,405,591 pounds, valued at $68,114, all landed fresh except 61,585 pounds salted, valued at $1,463. More than half of the catch was landed at Boston. There was an increase in the catch, as compared with the previous year, of 407,385 pounds, valued at $6,386.

HALIBUT

The catch of halibut amounted to 4,422,146 pounds, valued at $789,609, all landed fresh except 530 pounds salted, valued at $58. There was a decrease of 9.28 per cent in the quantity and 14.44 per cent in the value of the halibut landed in 1924, as compared with the previous year. The quantity landed at Boston was 3,934,627 pounds, valued at $711,946; at Gloucester, 11,135 pounds, valued at $1,012; and at Portland, 476,384 pounds, valued at $76,651.

MACKEREL

The total catch of fresh mackerel taken by the American fishing fleet in 1924 was 102,067 barrels, or 15,310,050 pounds, compared with 121,982 barrels, or 18,297,300 pounds, in 1923, a decrease of

19,915 barrels, or 2,987,250 pounds. The total catch of salted mackerel landed by the fishing fleet was 10,841 barrels, or 2,168,200 pounds, compared with 3,864 barrels, or 772,800 pounds, in 1923, an increase of 6,977 barrels, or 1,395,400 pounds. In 1924 about 8,000 barrels of salted mackerel were prepared from mackerel landed fresh, as compared with about 15,000 barrels in 1923. The quantity of mackerel landed at Boston, Gloucester, and Portland by fishing vessels during the year was 9,757,509 pounds, valued at $541,784, of which 8,474,322 pounds, valued at $450,323, were fresh and 1,283,187 pounds, valued at $91,461, were salted. There was a decrease of 1,807,719 pounds in the total catch of mackerel landed by fishing vessels at these ports and an increase of $54,147 in value as compared with 1923.

In 1924 the catch of mackerel up to July 3 was 38,916 barrels fresh and 860 barrels salted, compared with 25,879 barrels fresh and 346 barrels salted for the same period in 1923. The southern mackerel seiners had the best season for many years, but the gill-netters had a comparatively poor season. The mackerel taken by the seiners weighed about 1 pound each. The fleet was about the same size as last year. The first catch was landed at Cape May on April 8 and consisted of one barrel of blink mackerel, weighing three fish to the pound. These fish were landed one day earlier than the first mackerel were landed the previous season.

A large body of small mackerel was reported in the south. Large schools of large mackerel were also seen off Block Island late in the spring, but they were "wild", and it was impossible to seine them. The small mackerel landed by the southern fleet sold at from 7 to 15 cents per pound and the large ones at 9 to 25 cents per pound, according to market conditions. The first arrival of mackerel at Boston direct from the fleet was on May 16 and consisted of 5,000 pounds of large fresh fish, which were sold at 22 cents per pound. The Cape Shore mackerel fleet was about the same size as in 1923, but there was a decline in the catch. A considerable quantity of small mackerel was landed from the Cape Shore, which was unusual. The first arrivals of mackerel at Boston from the Cape Shore were two fares on July 9, consisting of 56,000 pounds of fish weighing 1¼ pounds each and 30,000 pounds of large mackerel. The mackerel sold at from 8 to 8½ cents per pound.

The quantity of mackerel salted by the Cape fleet was small but larger than last year. They were about half mediums, and counted from 260 to 300 fish to a barrel. They sold from the vessel at $14 per barrel, as compared with $11 per barrel the previous year.

The Cape Shore catch of mackerel for the past five years, shown in pounds, was as follows:

Year	Trips	Fresh	Salted
1924	24	996,000	170,800
1923	31	1,240,680	42,200
1922	38	1,353,900	468,800
1921	29	2,160,100	628,400
1920	30	1,290,000	443,400

SWORDFISH

The catch of swordfish amounted to 2,023,416 pounds, valued at $449,837. There were 45 vessels engaged in this fishery, or 7 less than in the previous year. There was a decrease in the catch of 17.59 per cent in quantity but an increase of 0.38 per cent in value.

FLOUNDERS

The catch of flounders in the vessel fisheries amounted to 4,335,227 pounds, valued at $191,515, an increase of 898,407 pounds, or 26.14 per cent, in quantity and of $27,832, or 17 per cent, in value. The catch taken by boats under 5 tons net tonnage is not included in these statistics.

HERRING

The catch of herring amounted to 4,410,736 pounds, valued at $127,867. Of this quantity 1,467,256 pounds, valued at $19,496, were taken off the coast of the United States and landed fresh, and the remainder, consisting of 2,943,480 pounds salted, valued at $108,371, were Newfoundland herring.

OTTER-TRAWL FISHERY

In 1924 there were 543 trips landed at Boston, Gloucester, and Portland by 32 otter-trawl vessels, amounting to 46,703,035 pounds of fish, valued at $1,327,731, or 25.53 per cent of the quantity and 19.99 per cent of the value of the total catch landed by fishing vessels at these ports during the year. The catch included cod, 8,231,430 pounds, valued at $286,562; haddock, 35,197,940 pounds, valued at $867,756; hake, 616,853 pounds, valued at $18,210; pollock, 1,028,032 pounds, valued at $39,467; cusk, 10,720 pounds, valued at $460; halibut, 94,221 pounds, valued at $22,069; and other species, 1,523,839 pounds, valued at $93,207. The catch by otter trawls consists principally of haddock, which in 1924 amounted to 44.05 per cent of the quantity and 37.59 per cent of the value of the entire catch of this species landed by fishing vessels at these ports. The otter-trawl catch was taken chiefly from Western Bank, Georges Bank, South Channel, and Nantucket Shoals.

Compared with the previous year, there was one vessel less engaged in this fishery and a decrease of 122 trips, or 18.35 per cent, and of 7,595,254 pounds, or 13.99 per cent, in the quantity, and of $368,590, or 21.73 per cent, in the value of the products landed.

The following tables give, by fishing grounds and months, the catch landed by otter trawlers at these ports in 1924 and also the catch of cod, haddock, and hake landed by them in various years.

Fishery products landed at Boston and Gloucester, Mass., and Portland, Me., by otter trawlers in 1924

	Trips	Cod		Haddock		Hake		Pollock	
BY FISHING GROUNDS									
East of 66° W. longitude									
	No.	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Western Bank	89	3,915,383	$117,935	6,890,167	$140,472	7,220	$184	382,824	$9,291
West of 66° W. longitude									
Georges Bank	95	2,035,160	71,626	5,522,130	138,317	16,495	506	61,480	3,718
South Channel	247	1,977,102	79,782	15,430,565	402,226	438,503	13,270	435,128	19,920
Nantucket Shoals	107	279,935	15,765	7,151,748	179,234	139,525	3,795	119,300	5,279
Off Chatham	5	23,850	1,454	203,330	7,507	15,110	455	29,300	1,259
Total	543	8,231,430	286,562	35,197,940	867,756	616,853	18,210	1,028,032	39,467
BY MONTHS									
January	62	492,660	31,727	2,829,195	119,519	81,775	3,290	129,497	6,775
February	60	947,924	27,207	3,818,480	86,133	31,050	1,333	57,125	3,313
March	53	1,189,690	44,182	3,869,788	125,819	22,250	933	68,143	2,993
April	43	1,129,914	27,495	3,824,485	73,583	10,840	606	140,840	3,470
May	42	503,230	11,979	3,499,890	73,770	42,820	1,553	50,055	1,327
June	39	171,055	6,584	2,759,815	53,279	153,120	3,853	9,940	363
July	34	525,025	13,208	2,149,843	34,917	30,045	687	28,910	787
August	23	808,945	22,194	1,357,140	23,282	12,445	276	25,936	1,050
September	31	589,892	17,017	1,972,225	32,860	56,400	1,144	51,178	1,416
October	53	508,642	17,736	2,757,680	53,052	58,228	918	28,800	892
November	44	553,581	24,021	2,844,769	71,132	51,950	964	136,814	3,969
December	59	810,872	43,212	3,514,630	120,410	65,930	2,653	300,794	13,112
Total	543	8,231,430	286,562	35,197,940	867,756	616,853	18,210	1,028,032	39,467

	Cusk		Halibut		Miscellaneous		Total	
BY FISHING GROUNDS								
East of 66° W. longitude								
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Western Bank	205	$4	28,817	$5,325	40,785	$1,038	11,265,401	$274,249
West of 66° W. longitude								
Georges Bank	6,100	305	20,660	5,438	250,300	17,393	7,912,325	237,303
South Channel	3,885	124	41,223	10,359	924,363	56,458	19,250,769	582,139
Nantucket Shoals	530	27	3,324	855	288,525	16,257	7,982,887	221,212
Off Chatham			197	92	19,866	2,061	291,653	12,828
Total	10,720	460	94,221	22,069	1,523,839	93,207	46,703,035	1,327,731
BY MONTHS								
January	150	3	7,077	1,954	92,125	9,508	3,632,479	172,776
February			12,819	3,492	88,580	7,591	4,955,978	129,069
March	200	3	10,168	2,643	127,671	8,289	5,287,910	184,862
April	6,155	306	20,175	3,773	169,731	7,034	5,302,140	116,267
May	2,150	80	9,411	1,818	167,710	6,009	4,275,266	96,536
June	1,340	34	5,021	976	112,809	3,804	3,213,100	68,893
July			3,440	610	120,963	3,490	2,858,226	53,699
August			6,228	1,377	126,626	6,069	2,337,320	54,248
September			8,162	1,916	117,446	8,246	2,795,303	62,599
October	400	24	5,517	1,354	138,510	10,879	3,497,777	84,855
November			2,049	610	171,220	13,080	3,760,383	113,776
December	325	10	4,154	1,546	90,448	9,208	4,787,153	190,151
Total	10,720	460	94,221	22,069	1,523,839	93,207	46,703,035	1,327,731

Cod, haddock, and hake landed at Boston and Gloucester, Mass., and Portland, Me., by otter trawlers in various years, 1908 to 1924

Year	Trips	Cod	Haddock	Hake	Year	Trips	Cod	Haddock	Hake
	No.	*Pounds*	*Pounds*	*Pounds*		*No.*	*Pounds*	*Pounds*	*Pounds*
1908	44	209,800	1,542,000	46,600	1914	387	1,149,595	15,383,550	259,913
1909	47	159,800	1,719,000	74,400	1920	646	6,311,389	51,962,457	
1910	59	125,850	2,775,000	46,600	1921	346	2,482,833	26,734,893	241,650
1911	178	564,500	7,367,100	151,700	1922	578	11,161,947	35,878,524	576,370
1912	295	1,952,950	12,966,700	105,500	1923	665	14,961,590	35,527,297	471,660
1913	326	1,667,806	12,488,992	209,485	1924	543	8,231,430	35,197,940	616,853

DAYS' ABSENCE

In order to provide more accurate information on the fishing effort, statistics on the number of days' absence from ports of vessels on fishing trips were taken during 1924. The days' absence on each trip was reckoned as including the date of departure and date of arrival. Unfortunately, these data were not collected at Boston during the entire month of January, 1924, and it was therefore impossible to incorporate them in the general tables on New England vessel fisheries. They are presented by months, grounds, and ports for all vessels, including otter trawlers, and for otter trawlers separately, in the following tables:

Days' absence from port of fishing vessels landing fish at Boston and Gloucester, Mass., and Portland, Me., 1924

Fishing grounds	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
BOSTON													
East of 66° W. longitude													
La Have Bank			21	89	28	36	22	101	48	22	22	128	
Western Bank		44	40	96	144	263	436	192		80	60	308	
Quereau Bank		60	53	91	38	91	17	139	218	52	6		
Green Bank		30	8	21						21			
Grand Bank			19	51	78	172	156	60	40	32			
St. Peters Bank					60	91	92	22			64		
Burgeo Bank									22				
Off Newfoundland					46								
Cape Shore					20	378			422	17	53	7	
The Gully			30	25									
Labrador Coast								32					
West of 66° W. longitude													
Browns Bank		37	74	387	405	67	141	112	115	119	33	236	
Georges Bank		1,188	907	403	390	433	1,636	1,324	723	195	69	29	
Cashes Bank			3			4			25	37			
Clark Bank												9	
Fippenies Bank									4	4	4		
Tillies Bank									8				
Middle Bank		37	86	41	21	7	23	241	29	80	134	106	
Jeffreys Ledge		122	131	73					26	114	380	369	
South Channel		341	354	272	201	524	541	329	735	885	540	405	
Nantucket Shoals					133	162	185	92	19	124	185	224	
Off Chatham		32	32	21	22	8	98	67	19	12		49	
Seal Island										7	7		
Shore, general		148	130	269	283	385	201	221	262	263	156	174	
Total		2,039	1,888	1,839	1,869	2,621	3,548	2,932	2,715	2,064	1,713	2,044	
GLOUCESTER													
East of 66° W. longitude													
La Have Bank			31	87		14		70	105	23	11		341
Western Bank	13	32	34	52	208	432	578	494	96		65		2,004
Quereau Bank			27	76	92	57	83	152	92	60	40		679
Green Bank				22						51			73
Grand Bank				183	96	306	186	101		13			885
St. Peters Bank					59	94	172	20			30		375
Off Newfoundland	82	174										267	523
Cape Shore					10	238					9		257
West of 66° W. longitude													
Browns Bank				201	190	20			55	61	9		536
Georges Bank	16	285	334	297	244	27	166	233	358	182	9		2,151
Cashes Bank											6		6
Middle Bank							45	132	26				203
South Channel					19	61	151	18	20	81	25		375
Nantucket Shoals						13	17				8		38
Shore, general	41	82	172	211	230	181	156	177	696	301	538	286	3,071
Total	152	573	598	1,129	1,148	1,443	1,554	1,397	1,448	772	750	553	11,517

Days' absence from port of fishing vessels landing fish at Boston and Gloucester, Mass., and Portland, Me., 1924—Continued

Fishing grounds	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
PORTLAND													
East of 66° W. longitude													
La Have Bank				17				30		5			52
Western Bank	24	27	129	99	29			24	54	44	12	18	460
Quereau Bank					13	7	43			22			85
Green Bank						9							9
Grand Bank						33	38						71
St. Peters Bank						24	56						80
Burgeo Bank				20									20
Cape Shore						67		16	213				296
Gulf of St. Lawrence					10								10
St. Anns Bank						28							28
The Gulley				26									26
West of 66° W. longitude													
Browns Bank					45	19		18					82
Georges Bank							81	52					133
Cashes Bank				7	5	15			12	31			70
Fippenies												2	2
Middle Bank			3							4			7
Platts Bank	31	5	16	28	16			3		91	56	21	267
Jeffreys Ledge	92	53	36	17				39	45	33	58	42	415
Shore, general	67	81	106	122	112	220	249	194	89	113	78	46	1,477
Total	214	166	290	336	230	422	467	376	413	343	204	129	3,590
Grand total	2,778	2,776	3,304	3,247	4,486	5,569	4,705	4,576	3,179	2,667	2,726		

NOTE.—Data for Boston for January are not available.

Days' absence from port of otter trawlers landing fish at Boston and Gloucester, Mass., and Portland, Me., 1924

Fishing grounds	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Tota
BOSTON													
East of 66° W. longitude													
Western Bank		44	10	96	86		54			80	60	300	
West of 66° W. longitude													
Georges Bank		313	137	58	5		11	108	27			12	
South Channel		169	170	150	92	80	73	14	189	192	150	147	
Nantucket Shoals					120	95	93	31		30	162	224	
Off Chatham			8							12		20	
Total		526	325	304	303	175	231	153	216	314	372	703	
GLOUCESTER													
East of 66° W. longitude													
Western Bank				27	59		47	23					156
West of 66° W. longitude													
Georges Bank		8						32					40
South Channel					19	61	29	8		39			156
Nantucket Shoals						13	17				8		38
Total		8		27	78	74	93	63		39	8		390
PORTLAND													
East of 66° W. longitude													
Western Bank	24		129	99	29				12		12	18	323
Grand total	534	454	439	410	249	324	216	228	353	392	721		

NOTE.—Data for Boston for January are not available.

VESSEL FISHERIES AT SEATTLE, WASH.

In 1924 there was a decrease in quantity in the vessel fisheries at Seattle, Wash., as compared with 1923, but an increase in the value of the products landed by the fishing fleet, and there was an increase in both the quantity and value of products landed by collecting vessels, which was due chiefly to an increase in the landings of salmon. Statistics of the vessel fisheries at Seattle have been collected by the local agent and published as monthly and annual statistical bulletins giving the quantity and value of fishery products landed by American fishing and collecting vessels at that port.

In 1924 the fishing fleet at Seattle landed 854 trips, amounting to 10,066,010 pounds of fish, having a value to the fisherman of $1,329,957. The catch was taken chiefly from fishing grounds along the coast from Oregon to Portlock Bank, Alaska. The fishing areas from which the largest quantities were taken were Flattery Banks and Hecate Strait. The products included halibut, 7,362,960 pounds, valued at $1,197,229; sablefish, 2,030,300 pounds, valued at $110,971; "lingcod," 465,975 pounds, valued at $14,403; and rockfishes, 206,775 pounds, valued at $7,354. Compared with 1923 there was a decrease of 65 trips by fishing vessels and of 171,580 pounds, or 1.68 per cent, in the quantity, and an increase of $8,370, or 0.63 per cent, in the value of the products landed. There was a decrease in the catch of halibut of 442,030 pounds, or 5.66 per cent, but an increase in value of $8,351, or 0.70 per cent. The catch of sablefish also decreased 78,300 pounds, or 3.71 per cent, and $12,543, or 10.16 per cent in value. There was an increase in the catch of "lingcod" of 271,875 pounds, or 140.07 per cent and of $10,048, or 230.72 per cent in value, and the catch of rockfishes also increased 76,875 pounds, or 59.18 per cent, and $2,514, or 51.94 per cent in value.

The fishery products taken in Puget Sound and landed at Seattle by collecting vessels during the year amounted to 18,166,710 pounds, valued at $1,389,265. The products included salmon, 16,313,010 pounds, valued at $1,290,093; herring, 316,600 pounds, valued at $2,871; sturgeon, 23,800 pounds, valued at $2,198; steelhead trout, 88,860 pounds, valued at $8,886; smelt, 318,600 pounds, valued at $24,622; perch, 69,900 pounds, valued at $4,902; rockfishes, 128,600 pounds, valued at $8,044; "lingcod," 51,110 pounds, valued at $1,678; flounders, 96,300 pounds, valued at $1,921; sole, 254,750 pounds, valued at $9,560; and crabs, 505,600 pounds, valued at $34,490. Compared with 1923 there was an increase of 779,232 pounds, or 4.48 per cent, in the products landed by collecting vessels with an increase in value of $80,534, or 6.15 per cent. The quantity and value of fishery products landed at Seattle by fishing and collecting vessels in 1924 are given in detail in the following tables:

Statement, by fishing grounds and months, of quantities and values of certain fishery products landed at Seattle, Wash., by American fishing vessels, 1924

	Number of trips	Halibut, fresh		Sablefish, fresh	
FISHING GROUNDS		*Pounds*	*Value*	*Pounds*	*Value*
Oregon Coast	10	48,800	$9,336	67,500	$3,915
Flattery Banks	443	1,935,460	330,827	1,585,300	87,084
Hecate Strait	384	4,863,900	772,328	367,800	19,323
Forrester Island Grounds	3	19,500	3,690	1,700	89
Coronation Island	2	81,000	12,150		
Yakutat Grounds	7	249,500	42,450	8,000	560
Portlock Bank	5	164,800	26,448		
Total	854	7,362,960	1,197,229	2,030,300	110,971
MONTHS					
January	9	112,800	19,450	22,000	1,360
February	20	70,400	14,193	20,100	1,447
March	59	364,100	61,191	34,500	2,085
April	90	617,600	94,081	19,300	1,311
May	141	1,238,300	174,950	70,100	4,087
June	103	1,094,400	164,202	151,800	7,560
July	97	1,161,300	196,427	290,800	14,540
August	105	1,101,810	167,646	515,000	26,230
September	90	796,300	143,009	364,500	19,310
October	86	483,000	97,763	372,500	21,659
November	51	322,950	64,317	167,700	11,207
December	3			2,000	175
Total	854	7,362,960	1,197,229	2,030,300	110,971

	"Lingcod," fresh		Rockfishes, fresh		Total, fresh	
FISHING GROUNDS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Oregon Coast	1,700	$34			118,000	$13,285
Flattery Banks	341,825	11,430	137,375	$5,225	3,999,960	434,566
Hecate Strait	118,450	2,779	69,400	2,129	5,419,550	796,559
Forrester Island Grounds					21,200	3,779
Coronation Island					81,000	12,150
Yakutat Grounds					257,500	43,010
Portlock Bank	4,000	160			168,800	26,608
Total	465,975	14,403	206,775	7,354	10,066,010	1,329,957
MONTHS						
January					134,800	20,810
February	11,000	440			101,500	16,080
March	55,500	2,145	18,000	720	472,100	66,141
April	61,900	2,484	53,900	2,684	752,700	100,560
May	80,200	2,488	33,000	940	1,421,600	182,465
June	45,050	901	11,350	235	1,302,600	172,898
July	43,075	862	7,875	158	1,503,050	211,987
August	57,150	1,053	17,350	347	1,691,310	195,276
September	26,800	536	28,600	592	1,216,200	163,447
October	43,500	905	15,000	355	914,000	120,682
November	19,300	904	11,200	488	521,150	76,916
December	22,500	1,685	10,500	835	35,000	2,695
Total	465,975	14,403	206,775	7,354	10,066,010	1,329,957

Fishery products, by months, taken in Puget Sound and landed at Seattle, Wash., by collecting vessels, 1924

Species	January		February		March		April		May	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Sturgeon									12,000	$120
Herring	30,000	$600	31,600	$316	65,000	$325	122,000	$610		
Salmon:										
King or spring									663,000	79,930
Coho or silver									32,000	3,500
Trout: Steelhead									16,000	1,600
Smelt	32,000	3,200					14,800	1,480		
Perch	11,500	960	8,000	560	7,000	500	21,000	1,050		
Rockfishes	8,000	160	7,300	584	12,600	1,008	5,800	464		
"Lingcod"	14,000	288	12,400	872	2,400	72				
Flounders	4,000	120	7,500	150	9,500	145	4,350	87	12,800	256
Sole	38,500	1,440	17,800	712	23,000	690	21,100	844	18,400	536
Crabs	79,200	5,400	66,000	4,600	48,000	3,280	98,340	6,705	53,460	3,645
Total	217,200	12,168	150,600	7,794	167,500	6,020	287,390	11,240	807,660	89,587

Species	June		July		August		September	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Sturgeon	2,380	$238			4,800	$960		
Salmon:								
Humpback or pink			24,600	$584	13,600	272	42,000	$1,680
Chum or keta			6,000	120	12,800	274	36,300	989
King or spring	2,652,310	265,231	3,671,500	367,150	1,716,000	171,600	192,000	19,200
Coho or silver	157,400	11,018	406,100	20,305	564,000	22,560	2,160,000	129,600
Sockeye or red	33,000	3,330	27,000	1,350	57,900	5,790		
Trout: Steelhead	23,610	2,361	22,350	2,235	16,400	1,640		
Smelt			61,000	6,100	9,500	760	41,100	3,288
Perch					14,000	1,160		
Rockfishes	11,600	1,160	14,300	858	15,000	1,050	16,000	320
"Lingcod"	4,310	86	18,000	360				
Flounders	8,100	162	13,350	267	14,600	292	8,350	167
Sole	16,000	640			17,350	594	14,000	560
Total	2,908,710	284,226	4,264,200	399,329	2,455,950	206,952	2,509,750	155,804

Species	October		November		December		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Sturgeon	4,200	$880					23,380	$2,198
Herring					68,000	$1,020	316,600	2,871
Salmon:								
Humpback or pink							80,200	2,536
Chum or keta	920,000	36,800	750,000	$26,250			1,725,100	64,433
King or spring	86,000	8,600	18,500	1,850			8,999,310	913,561
Coho or silver	1,828,000	109,680	243,000	2,430			5,390,500	299,093
Sockeye or red							117,900	10,470
Trout: Steelhead	10,500	1,050					88,860	8,886
Smelt	18,200	1,274	86,000	5,160	56,000	3,360	318,600	24,622
Perch					8,400	672	69,900	4,902
Rockfishes	8,000	160	18,000	1,440	12,000	840	128,600	8,044
"Lingcod"							51,110	1,678
Flounders	4,100	82	4,850	97	4,800	96	96,300	1,921
Sole	10,600	424	16,000	640	62,000	2,480	254,750	9,560
Crabs	34,320	2,340	73,480	5,020	52,800	3,500	[1] 505,600	34,490
Total	2,923,920	161,290	1,209,830	42,887	264,000	11,968	18,166,710	1,389,265

[1] 49,119 dozen.

FISHERY PRODUCTS RECEIVED AT MUNICIPAL FISH WHARF AND MARKET, WASHINGTON, D. C.[2]

The receipts of fishery products at the municipal fish wharf and market, Washington, D. C., in 1924, amounted to 8,007,704 pounds, an increase of 2,329,547 pounds, or 42.79 per cent, as compared with 1923. The most important products in quantity were river herring, including roe, 1,327,020 pounds; squeteagues or "sea trout," 1,240,450 pounds; croaker, 999,000 pounds; oysters, 710,916 pounds; shad, including roe, 555,154 pounds; and haddock, 469,280 pounds. The species ranking next in importance include butterfish, catfish, flounders, halibut, mackerel, perch, striped bass, and crabs.

[2] Daily reports of the quantity of fishery products received at this market are received by the bureau for tabulation through the courtesy of the health department of the District of Columbia.

Fishery products, in pounds, received at Municipal Fish Wharf and Market, Washington, D. C., 1924

Species	January	February	March	April	May	June	July
Bass, black or sea	18,800	20,500	9,600	600	3,500	9,527	5,700
Bluefish		700	4,900	5,300	1,800	2,300	1,400
Bowfin			100				
Butterfish	2,100	600		4,000	21,400	49,800	54,100
Carp	7,075	8,975	10,350	7,265	20,500	11,353	6,525
Catfish	12,875	6,950	28,000	40,200	22,200	23,851	10,100
Cod:							
Fresh	2,400	5,900	7,725	3,550	4,900	6,475	3,500
Salted	1,000						
Croaker	21,000	2,900	2,400	230,400	164,000	152,300	210,600
Eels	400		230	2,050	600	1,191	300
Flounders	10,800	29,200	34,100	13,900	11,800	9,600	5,400
Gizzard shad	2,025						
Haddock:							
Fresh	41,450	82,800	76,930	43,750	18,170	15,350	10,950
Smoked	90	860	280				
Hake	4,400						
Halibut	34,950	6,250	10,150	10,375	8,250	11,725	12,375
Herring, river:							
Fresh	38,600	25,650	90,500	580,000	151,800	1,900	
Salted				22,000	279,250	52,500	
Roe					11,820		
Hickory shad or "jacks"	4,475	3,725	5,400	4,400	1,400		
Kingfish	3,200	400		1,300	2,000	300	600
Mackerel:							
Fresh	24,800	23,200	4,950	11,600	10,500	30,150	19,500
Salted	300	420	60	300		600	
Mullet	30	800	500		200		
Perch	14,825	15,525	88,300	44,400	10,500	7,475	3,300
Pike or pickerel	2,360	3,350	3,175	200	200	550	50
Pollock	1,000					250	850
Pompano		100			200		
Redfish or red drum				625		200	
Red snapper	1,000	200	200		200		
Salmon:							
Fresh	5,000	6,100			200	2,200	2,800
Smoked	30	550	400				
Sergeant fish	50						
Scup or porgy					300	1,300	2,500
Shad	23,904	29,000	89,250	275,000	126,700	6,000	
Shad roe	225	350	225				
Sheepshead						100	
Smelt	6,940	2,970	1,080				
Spot	1,600				1,300	4,000	6,400
Squeteagues or "sea trout"	35,400	20,800	25,100	31,100	271,800	122,400	129,400
Squid					3,200		
Striped bass	875	4,950	22,300	66,600	17,000	11,050	9,400
Sturgeon				175	1,174		
Swordfish							600
Tilefish	800	800		850	300		
Whiting			500		600		2,000
Clams, hard	2,240	3,068	4,360	3,936	7,072	7,328	6,176
Oysters:							
In the shell	62,734	38,451	53,900	8,911	1,225	224	
Opened	58,773	39,237	39,658	14,710	99		
Scallops	1,048	1,120	880	2,488	1,440	1,280	640
Crabs, hard				225	11,010	40,950	107,835
Crab meat		75	400	925	6,110	12,600	12,920
Frogs				15	55	121	
Lobsters			50	274	550	300	200
Shrimp	730	1,150	1,800	1,500	750	3,450	3,600
Turtles	1,280	648	286	290	349	1,116	78
Total	451,584	388,274	618,039	1,433,214	1,196,424	601,816	629,799

Fishery products, in pounds, received at Municipal Fish Wharf and Market, Washington, D. C., 1924—Continued

Species	August	September	October	November	December	Total
Bass, black or sea	1,800	600	3,800	14,100	29,156	117,683
Bluefish	3,800	6,600	8,800	200		35,800
Bowfin					200	300
Butterfish	70,500	52,250	26,400	10,300	1,150	292,600
Carp	2,300	5,850	7,450	6,600	9,380	103,623
Catfish	7,900	19,940	42,250	21,700	9,435	245,401
Ciscoes		100	600	600	200	1,500
Cod:						
Fresh	6,500	4,550	3,300	3,200	3,550	55,550
Salted						1,000
Crappie				400		400
Croaker	144,300	24,000	8,300	10,500	28,300	999,000
Eels	300	550	2,500	1,200	1,300	10,621
Flounders	4,200	10,075	23,100	20,100	7,200	179,475
Gars			200			200
Gizzard shad		275	5,700	5,550	8,600	22,150
Haddock:						
Fresh	17,000	31,250	44,800	49,900	35,700	468,050
Smoked						1,230
Hake			7,800	70,000	6,600	88,800
Halibut	10,650	10,650	11,560	14,400	33,100	174,435
Herring, river:						
Fresh				51,000	22,000	961,450
Salted						353,750
Roe						11,820
Hickory shad or "jacks"						19,400
Kingfish			200	4,700	25,400	38,100
Mackerel:						
Fresh	15,700	12,200	7,800	9,300	26,600	196,300
Salted						1,680
Menhaden			200			200
Mullet				100	150	1,780
Perch	5,300	7,400	9,400	12,600	20,775	239,800
Pigfish	200		400			600
Pike or pickerel	200	300	1,300	1,500	3,070	16,255
Pollock		800	1,900	3,900	21,200	29,900
Pompano				200		500
Redfish or red drum			200	200		1,225
Red snapper					1,200	2,800
Salmon:						
Fresh	1,700	6,400	10,200	2,500		37,100
Smoked						980
Sergeant fish						50
Scup or porgy	600	500	200			5,400
Shad				2,500	2,000	554,354
Shad roe						800
Sheepshead					150	250
Skates				200		200
Smelt						10,990
Spot	5,200	34,000	47,000	5,500		105,000
Squeteagues or "sea trout"	139,000	150,200	177,400	78,000	59,850	1,240,450
Squid	100		200	100		3,600
Striped bass	13,600	22,855	58,300	20,700	9,595	257,225
Sturgeon	95		260	125		1,829
Sunfish				200		200
Swordfish	115	200				915
Tarpon		70				70
Tilefish			400	300	200	3,650
Whitefish			1,400	100		1,500
Whiting			5,600	9,600	4,800	23,100
Clams, hard	7,360	5,440	4,672	2,688	3,776	[1] 58,116
Oysters:						
In the shell		13,349	52,661	87,605	71,771	[2] 390,831
Opened		12,821	51,307	51,802	51,678	[3] 320,085
Scallops	480	320	1,280	800	960	12,736
Crabs, hard	43,650	10,770	750			215,190
Crab meat	12,025	5,545	2,325	755	265	53,945
Frogs						191
Lobsters	50	200	200	50	100	1,974
Shrimp	7,200	2,400	1,500	3,456	1,200	28,730
Turtles	56	142	96	222	302	4,865
Total	521,881	452,602	633,711	579,447	500,913	8,007,704

[1] 2,265 bushels. [2] 55,833 bushels. [3] 38,798 gallons.

NOTE.—The clams have been reduced to pounds on the basis of 8 pounds of meat to a bushel, the oysters on the basis of 7 pounds of meat to a bushel and 8¼ pounds to a gallon.

SHAD AND ALEWIFE FISHERY OF THE POTOMAC RIVER

The regular annual statistics of the shad and alewife fisheries of the Potomac River were taken for the season of 1924. They show that in 1924 the shad fishery yielded 172,310 shad, weighing 578,210 pounds and valued at $88,450 to the fishermen. This marks an unprecedentedly small catch, amounting to only 49 per cent in number and 45 per cent in value of the 1923 catch, which itself was less than half as large as the previous year's catch.

The catch of alewives, amounting to 15,133,388 fish weighing 6,052,756 pounds and valued at $56,552 to the fishermen, was greater than the 1923 catch by 32 per cent in number and 14 per cent in value and was the largest catch in recent years.

The following tables give the detailed statistics for 1924 and comparative statistics on the shad and alewife catch of the Potomac River for the years on which statistics are available.

Shad and alewife fisheries of the Potomac River, 1924

Item	Maryland			Virginia			Total		
	Number	*Pounds*	*Value*	*Number*	*Pounds*	*Value*	*Number*	*Pounds*	*Value*
Fishermen	269			586			855		
Rowboats and scows	117		$4,320	194		$6,680	311		$11,000
Gasoline boats	52		14,575	221		71,960	273		86,535
Pound nets	83		9,150	308		97,325	391		106,475
Gill nets	107		10,225	290		12,239	397		22,464
Haul seines	2		1,100				2		1,100
Shore and accessory property			2,775			7,050			9,825
Total			42,145			195,254			237,399
Shad caught:									
With pound nets	4,570	15,406	2,326	105,103	348,031	51,570	109,673	363,437	53,896
With gill nets	30,185	104,082	16,895	29,702	102,894	16,411	59,887	206,976	33,306
With haul seines	2,750	7,797	1,248				2,750	7,797	1,248
Total	37,505	127,285	20,469	134,805	450,925	67,981	172,310	578,210	88,450
Alewives caught:									
With pound nets	1,634,000	653,600	6,085	12,978,388	5,190,956	46,972	14,612,388	5,844,556	53,057
With gill nets				321,000	128,200	2,695	321,000	128,200	2,695
With haul seines	200,000	80,000	800				200,000	80,000	800
Total	1,834,000	733,600	6,885	13,299,388	5,319,156	49,667	15,133,388	6,052,756	56,552

Production of shad in the Potomac River in various years, 1896 to 1924

Year	Maryland			Virginia			Total		
	Number	*Pounds*	*Value*	*Number*	*Pounds*	*Value*	*Number*	*Pounds*	*Value*
1924	37,505	127,285	$20,469	134,805	450,925	$67,981	172,310	578,210	$88,450
1923	93,619	308,729	52,917	257,927	878,653	145,702	351,546	1,187,382	198,619
1922	203,682	706,501	95,140	680,494	2,409,070	324,882	884,176	3,115,571	420,022
1921	49,681	138,207	25,191	356,191	1,022,231	182,179	405,872	1,160,438	207,370
1920	80,944	302,237	55,963	448,414	1,677,543	278,501	529,358	1,979,780	334,464
1919	94,512	354,420	56,833	449,957	1,687,339	275,564	544,469	2,041,759	332,397
1915	17,196	64,485	6,827	165,206	619,523	65,300	182,402	684,008	72,127
1909	31,158	116,843	9,232	172,813	648,049	44,500	203,971	764,892	53,732
1904	83,147	311,801	16,343	289,500	1,085,625	51,709	372,647	1,397,426	68,052
1901	146,000	547,500	14,800	648,462	2,431,733	104,566	794,462	2,979,233	119,366
1896	233,238	874,643	20,524	450,825	1,690,594	43,084	684,063	2,565,237	63,608

Production of alewives in the Potomac River in various years, 1909 to 1924

Year	Maryland			Virginia			Total		
	Number	*Pounds*	*Value*	*Number*	*Pounds*	*Value*	*Number*	*Pounds*	*Value*
1924	1,834,000	733,600	$6,885	13,299,388	5,319,156	$49,667	15,133,388	6,052,756	$56,552
1923	2,119,787	847,916	8,764	9,308,782	3,722,912	40,657	11,428,569	4,570,828	49,421
1922	1,292,500	517,000	3,700	10,074,500	4,029,800	34,642	11,367,000	4,546,800	38,342
1921	1,395,000	558,000	9,010	8,908,510	3,563,404	35,031	10,303,510	4,121,404	44,041
1920	1,077,775	538,888	13,940	7,681,561	3,813,780	41,197	8,759,336	4,352,668	55,137
1919	1,488,583	772,867	15,508	7,379,319	2,904,054	45,508	8,867,902	3,676,921	61,016
1915	335,000	----------	1,420	7,276,428	----------	30,741	7,611,428	----------	32,161
1909	4,883,000	----------	10,369	24,601,040	----------	42,854	29,484,040	----------	53,223

FLORIDA SPONGE FISHERY

In 1924 the quantity of sponges sold at the sponge exchange, Tarpon Springs, Fla., was 425,305 pounds, valued at $714,760, of which 265,392 pounds, valued at $599,221, were large wool; 58,021 pounds, valued at $72,652, small wool; 81,420 pounds, valued at $37,996, yellow; 14,898 pounds, valued at $2,661, grass, and 5,574 pounds, valued at $2,230, wire. It is estimated that sponges to the value of $50,000 were sold outside of the exchange at Tarpon Springs.

Compared with the production in 1923, this indicates a decrease of 13 per cent in total quantity and 3 per cent in total value. When compared with the annual production in the years 1919 to 1923, however, it is apparent that the 1924 production is only slightly below normal in quantity and above normal in value. The production of large wool sponges shows a gratifying increase and that of small wool and yellow sponges is being well maintained, but the production of grass and wire sponges has decreased considerably as compared with previous years. The unusually small yield of grass sponges in 1924 is attributed to the continued high winds, which caused unusual turbidity of inshore waters where these are fished and to some extent to the low prices that prevailed during the season.

The following table gives comparative statistics on the sponges sold at the Tarpon Springs Sponge Exchange from 1919 to 1924:

Sponges sold at the exchange, Tarpon Springs, Fla., 1919 to 1924

Year	Total		Large wool	Small wool	Yellow	Grass	Wire
	Pounds	*Value*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1924	425,305	$714,760	265,392	58,021	81,420	14,898	5,574
1923	490,200	734,391	243,230	54,292	87,878	88,772	16,028
1922	526,885	699,089	248,475	70,478	115,455	84,892	7,585
1921	386,390	540,093	173,723	63,786	70,218	65,745	12,918
1920	409,746	678,209	176,722	60,902	72 648	92,880	6,594
1919	424,075	707,964	205,462	76,309	73,051	62,547	6,706

FISHERIES OF THE PACIFIC COAST STATES IN 1922

The statistics of the fisheries of the Pacific Coast States for the calendar year 1922 were obtained from a canvass made during 1923. The canvass was conducted in a manner similar to that for the year 1915 in order that the statistics collected might be comparable to those of 1915 and previous canvasses. A summary has been published as Statistical Bulletin No. 647, but the detailed statistics are published herein for the first time.

COMMON AND SCIENTIFIC NAMES OF FISHES

Due to the confusion existing among the common names of fishes in the Pacific Coast States, it is difficult to secure a good separation of species in the statistics. The following list indicates the groupings which were necessary and the common names that have been used in the statistical tables to designate the various species of fish and shellfish:

Albacore and tuna	*Germo alalunga.* *Germo macropterus.* *Thunnus thynnus.*
Anchovies	*Engraulis mordax.* *Anchovialla delicatissimus.* *Anchovialla compressus.*
Barracuda	*Sphyræna argentea.*
Bonito and skipjack	*Sarda chilensis.* *Gymnosarda pelamis.*
Carp, German	*Cyprinus carpio.*
Catfish	*Ameiurus nebulosus.* *Ameiurus natalis.*
Cod	*Gadus macrocephalus.*
Dolly Varden trout	*Salvelinus malma.*
Flounders	*Pleuronectidæ* (species).
Flying fish	*Cypsilurus californicus.*
Grayfish	*Squalus sucklii*, and other sharks.
Hake	*Merluccius productus.*
Halfmoon	*Medialuna californiensis.*
Halibut	*Hippoglossus hippoglossus.*
Hardhead	*Othodon microlepidotus.*
Herring	*Clupea pallasii.*
Kingfish	*Genyonemus lineatus.*
Lingcod	*Ophiodon elongatus.*
Mackerel	*Scomber japonicus.*
Mullet	*Mugil cephalus.*
Perch	*Embiotocidæ* (species).
Pike, Sacramento	*Ptychocheilus oregonensis.*
Pilchard or sardine	*Sardinia cærulea.*
Pompano	*Peprilus simillimus.*
Rock bass	*Paralabrax clathratus.* *Paralabrax nebulifer.* *Paralabrax maculatofasciatus.*
Rockfishes	*Sebastodes* (species).
Sablefish	*Anaplopoma fimbria.*
Salmon:	
Blueback or sockeye	*Oncorhynchus nerka.*
Chinook	*Oncorhynchus tschawytscha.*
Chum or keta	*Onocrhynchus keta.*
Humpback or pink	*Oncorhynchus gorbuscha.*
Silver or coho	*Oncorhynchus kisutch.*
Sculpin	*Scorpæna guttata.* *Scorpænichthys marmoratus.*
Sea bass, black or jewfish	*Stereolepis gigas.*
Sea bass, white or squeteague	*Cynoscion nobilis.* *Cynoscion parvipinnis.*
Shad	*Alosa sapidissima.*
Sheepshead	*Pimelometopon pulcher.*
Skates	*Rhinobatidæ* (species). *Rajidæ* (species), and other skates and rays.
Smelt	*Atherindæ* (species). *Argentinidæ* (species).
Sole	*Pleuronectidæ* (species).
Splittail	*Pogonichthys macrolepidotus.*
Steelhead trout	*Salmo gairdneri.*

Striped bass	*Roccus lineatus.*
Sturgeon	*Acipenser transmontanus.*
	Acipenser medirostris.
Suckers	*Catostomus occidentalis.*
Swordfish	*Ziphias gladius.*
Tomcod	*Microgadus proximus.*
Whitebait	Small fry of any fish.
Whitefish	*Caulolatilus princeps.*
Yellowtail	*Seriola dorsalis.*
Crabs	*Cancer* (species).
	Echnoceras setimanus.
Crawfish	*Astacus* (species).
Spiny lobster	*Panulirus interruptus.*
Shrimp	*Crago* (species).
Abalone	*Haliotis* (species).
Clams, hard	*Saxidomus* (species).
Clams, Pismo	*Tivela stultorum.*
Clams, razor	*Siliqua patula.*
Clams, soft	*Mya arenaria.*
Cockles	*Cardium corbis.*
	Paphia (species).
	Chione (species).
Mussels	*Mytilus californianus.*
	Mytilus edulis.
Oysters, eastern	*Ostrea elongata.*
Oysters, native	*Ostrea lurida.*
Octopus	*Polypus hongkongensis.*
Squid	*Loligo opalescens.*
Turtles	*Chelonia agassizii.*

GENERAL STATISTICS

The Pacific Coast States, with their valuable salmon, halibut, tuna, and sardine fisheries, constitute one of our most important fishery sections. In 1922 there were 22,270 persons engaged in fishing and fishery industries, 698 vessels fishing and transporting fish, 4,173 power boats, and 1,041 sail and row boats fishing; $28,651,490 invested in vessels, boats, gear, and shore property connected with the fisheries, and a production of 282,968,421 pounds of fish, shellfish, and whale products valued at $12,983,583 to the fishermen.

According to the value of products, the salmon fishery, which is prosecuted all the way from Monterey, Calif., to Seattle, Wash., was the most important of the Pacific coast fisheries, producing 62,685,475 pounds, valued at $3,795,988 to the fishermen. Chinook salmon was the most important species, yielding 30,704,884 pounds, valued at $2,283,179. Next in importance was the halibut fishery, centering at Seattle. The fleets sailing out of ports in Washington and Oregon in 1922 landed 18,706,517 pounds, valued at $1,925,482. A portion of this catch was landed in British Columbia and Alaskan ports, as is explained in greater detail in the discussion of the fisheries of the State of Washington. Third in importance was the tuna fishery of California, which produced 36,900,805 pounds of albacore, tuna, bonito, and skipjack, valued at $1,847,567. The sardine fishery of southern California in 1922 landed 92,114,542 pounds, valued at $1,381,008.

The following table gives the statistics, by States, of the persons engaged, vessels, boats, gear, investment, and products of the fisheries of the Pacific Coast States in 1922:

Persons engaged, investment, and products of the fisheries of the Pacific Coast States in 1922

Items	Washington		Oregon		California		Total	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Persons engaged	7,600		5,497		9,173		22,270	
Vessels fishing	313	$1,556,000	4	$18,000	209	$1,440,940	526	$3,014,940
Tonnage	6,330		48		3,887		10,265	
Outfit		705,536		10,500		347,330		1,063,366
Vessels transporting	91	493,318	28	196,095	53	614,670	172	1,304,083
Tonnage	1,489		268		2,906		4,663	
Outfit		190,493		26,817		45,263		262,573
Power boats	1,158	786,200	1,718	703,475	1,297	1,660,560	4,173	3,150,235
Rowboats, sailboats, etc	248	11,310	501	66,305	292	29,671	1,041	107,286
Haul seines	88	10,561	44	35,988	45	6,650	177	53,199
Purse seines	115	151,000			54	120,000	169	271,000
Gill nets	684	94,815	2,847	587,804	2,820	171,805	6,351	854,424
Pound nets	270	766,546	45	81,450			315	847,996
Trammel nets					1,906	61,086	1,906	61,086
Paranzella nets					29	7,293	29	7,293
Lampara nets					415	223,085	415	223,085
Hoop nets, crab traps, etc	7,250	21,750	1,608	4,199	3,222	6,710	12,080	32,659
Dip nets			50	142	12	24	62	166
Reef nets	3	1,400					3	1,400
Fyke nets					222	1,332	222	1,332
Bag nets	67	8,410			74	2,200	141	10,610
Lines		86,465		11,590		38,401		136,456
Beam trawls	12	3,650					12	3,650
Otter trawls	1	1,000					1	1,000
Wheels	2	5,000	29	66,200			31	71,200
Pots and traps			1,534	4,053	4,549	12,415	6,083	16,468
Tongs, hoes, rakes, etc	363	1,376	84	682	271	486	718	2,544
Shrimp nets					30	700	30	700
Brush weirs	1	800					1	800
Clam forks	566	862					566	862
Abalone outfit					5	4,600	5	4,600
Whaling apparatus		3,600				26,800		30,400
Shore and accessory property		5,388,633		2,922,276		7,290,269		15,601,178
Cash capital		422,775		157,000		935,124		1,514,899
Total		10,711,500		4,892,576		13,047,414		28,651,490

PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna					25,252,392	$1,269,417	25,252,392	$1,269,417
Anchovies					652,516	13,049	652,516	13,049
Barracuda					6,284,065	439,817	6,284,065	439,817
Bonito					11,648,413	578,150	11,648,413	578,150
Carp, German	375,160	$12,054			55,054	1,649	430,214	13,703
Catfish					7,361	1,005	7,361	1,005
Cod, fresh	72,741	2,182					72,741	2,182
Cod, salted	1,175,875	86,395			1,680,000	84,000	2,855,875	170,395
Dolly Varden trout	300	48					300	48
Flounder	85,211	2,454			4,742,819	470,813	4,828,030	473,267
Flyingfish					8,495	174	8,495	174
Grayfish	6,359	22			314,176	6,709	320,535	6,731
Hake					78,763	1,576	78,763	1,576
Halfmoon					27,791	832	27,791	832
Halibut	18,467,422	1,904,915	239,095	$20,567			18,706,517	1,925,482
Hardhead					18,206	1,183	18,206	1,183
Herring	260,338	2,605			341,614	6,832	601,952	9,437
Kingfish					579,754	11,595	579,754	11,595
"Lingcod"	236,019	4,654	21,198	513	569,821	33,936	827,038	39,103
Mackerel	1,360	95			2,498,197	75,455	2,499,557	75,550
Mullet					148,628	16,341	148,628	16,341
Perch	50,927	2,616			236,431	9,056	287,358	11,672
Pike, Sacramento					7,370	230	7,370	230
Pilchard or sardine					92,114,542	1,381,008	92,114,542	1,381,008
Pompano					16,494	5,049	16,494	5,049
Rock bass					285,494	16,449	285,494	16,449
Rockfish	51,726	2,351	2,270	88	4,219,650	205,239	4,273,646	207,678
Sablefish	1,021,700	42,866	57,108	2,528	268,905	8,067	1,347,713	53,461

Persons engaged, investment, and products of the fisheries of the Pacific Coast States in 1922—Continued

Items	Washington		Oregon		California		Total	
Salmon:								
Blueback or sockeye	*Number* 5,104,380	*Value* $543,743	*Number* 935,789	*Value* $114,980			6,040,169	$658,723
Chinook	10,969,802	946,422	12,650,132	757,546	7,084,950	$579,211	30,704,884	2,283,179
Chum	6,319,808	137,190	128,385	1,413			6,448,193	138,603
Humpback	144,683	5,262					144,683	5,262
Silver	14,816,994	546,495	4,378,922	125,428	151,630	11,298	19,347,546	683,221
Sculpin					44,176	889	44,176	889
Sea bass:								
Black or Jewfish					87,559	4,502	87,559	4,502
White or squeteague	596	47			2,904,054	176,993	2,904,650	177,040
Shad	48,039	769	578,003	11,332	1,133,270	55,513	1,759,312	67,614
Sheepshead					18,245	194	18,245	194
Skates	4,227	27			121,753	2,437	125,980	2,464
Smelts	1,392,416	31,488	217,350	2,174	728,406	51,908	2,338,172	85,570
Sole	130,886	3,931	25	1	6,949,557	211,800	7,080,468	215,732
Splittail					10,408	310	10,408	310
Steelhead trout	475,687	34,075	1,820,734	136,802	2,490	174	2,298,911	171,051
Striped bass					678,820	62,747	678,820	62,747
Sturgeon	267,782	18,670	216,765	13,257			484,547	31,927
Suckers					1,348	27	1,348	27
Swordfish					24,363	506	24,363	506
Tomcod					31,344	1,251	31,344	1,251
Whitebait					84,007	8,828	84,007	8,828
Whitefish					32,184	1,609	32,184	1,609
Yellowtail					3,416,572	68,671	3,416,572	68,671
Other fish			5,343	267	217,781	7,657	223,124	7,924
Crabs	981,440	50,309	730,802	36,499	844,472	66,543	2,556,714	153,351
Crawfish			68,935	9,226			68,935	9,226
Spiny lobster					966,632	86,302	966,632	86,302
Shrimp	62,000	7,439			990,349	94,534	1,052,349	101,973
Abalone					1,523,543	60,943	1,523,543	60,943
Clams:								
Hard	693,245	11,424			34,189	2,280	[1] 727,434	13,704
Pismo					191,980	9,599	[2] 191,980	9,599
Razor	2,636,351	106,905	163,110	7,290			[3] 2,799,461	114,195
Soft			82,800	8,278	341,173	22,114	[4] 423,973	30,392
Mussels					13,212	580	[5] 13,212	580
Oysters:								
Eastern, market	45,710	24,416			94,598	101,351	[6] 140,308	125,767
Native, market	377,678	284,047	74,998	7,500			[7] 452,676	291,547
Native, seed	19,593	1,590					[8] 19,593	1,590
Octopus	20,225	64			99,274	3,409	119,499	3,473
Squid					208,875	9,200	208,875	9,200
Cockles					860	51	860	51
Turtles					1,452	64	1,452	64
Sperm oil	260,625	12,163			37,875	2,525	298,500	14,688
Whale oil	1,762,500	94,000			6,862,500	366,000	8,625,000	460,000
Other whale products	1,130,000	30,180			3,136,000	64,330	4,266,000	94,510
Total	69,469,805	4,953,913	22,371,764	1,255,689	191,126,852	6,773,981	282,968,421	12,983,583

[1] 90,929 bushels.
[2] 23,997 bushels.
[3] 279,946 bushels.
[4] 42,397 bushels.
[5] 1,321 bushels.
[6] 20,044 bushels.
[7] 64,668 bushels.
[8] 2,799 bushels.

NOTE.—In this report all craft of 5 net tons and upward are classed as vessels and all under 5 net tons are classed as boats.

COMPARISON WITH PREVIOUS STATISTICS

An examination of statistics available for former years strikingly reveals the changes taking place in the Pacific coast fisheries. With the development during the last decade of her tuna and sardine fisheries, California has forged ahead to leading place among the Pacific Coast States. Between 1908 and 1915 the number of persons engaged increased from 4,129 to 8,452, with a further increase to 9,173 in 1922. The investment increased successively from $1,659,000 in 1908 to $5,824,263 in 1915 and to $13,047,414 in 1922. The value of her products increased from $1,970,000 in 1908 to $2,506,702 in 1915 and to $6,773,981 in 1922.

Washington, having passed the peak of development in her salmon and halibut fisheries, took second place in 1922. The number of persons engaged dropped from 14,645 in 1915 to 7,600 in 1922, her investment from $14,129,553 to $10,711,500, and her production from $5,320,725 to $4,953,913.

The decline in Oregon fisheries was less severe. The number of persons engaged was somewhat lower in 1922 than in 1915, the investment slightly higher and the value of products was lower.

The following table gives a summary of the comparative statistics on these States for various years from 1888 to 1922.

Summary of persons engaged, capital invested, and value of products in the fisheries of the Pacific Coast States in certain years from 1888 to 1922

Items and States	1888	1892	1895	1899	1904	1908	1915	1922
PERSONS ENGAGED								
Washington	3,363	4,310	6,212	9,911	8,829	4,954	14,645	7,600
Oregon	3,619	4,332	6,323	5,643	5,299	4,772	5,900	5,497
California	4,684	5,403	4,770	3,974	5,530	4,129	8,452	9,173
Total	11,666	14,045	17,305	19,528	19,658	13,855	28,997	22,270
CAPITAL INVESTED								
Washington	$1,261,078	$1,593,567	$2,024,469	$6,601,243	$5,319,201	$3,442,000	$14,129,553	$10,711,500
Oregon	1,859,299	2,272,351	2,637,412	3,497,643	3,756,692	1,367,000	4,064,151	4,892,576
California	2,081,950	2,526,746	2,612,298	2,774,493	3,764,056	1,659,000	5,824,263	13,047,414
Total	5,202,327	6,392,664	7,274,179	12,873,379	12,839,949	6,468,000	24,017,967	28,651,490
VALUE OF PRODUCTS								
Washington	810,326	931,568	1,402,433	2,871,438	2,972,633	3,513,000	5,320,725	4,953,913
Oregon	733,867	872,405	1,284,136	855,750	1,185,092	1,356,000	1,479,021	1,255,689
California	2,465,317	3,022,991	1,786,479	2,551,451	2,523,141	1,970,000	2,506,702	6,773,981
Total	4,009,510	4,826,964	4,473,048	6,278,639	6,680,866	6,839,000	9,306,448	12,983,583

CATCH OF INTRODUCED SPECIES

Several species of fish that have been introduced into waters of the Pacific Coast States from eastern sections of the United States have become well-established and yield an appreciable portion of the commercial catch. In order that the size of this catch may be readily followed through the years, the available statistics are presented in the table following.

Comparative statement of the catch of introduced species in the Pacific Coast States in 1899, 1904, 1908,[1] 1915, and 1922

State	Carp		Catfish		Shad		Striped bass		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
1899—Washington			105,700	$2,114	85,000	$1,275			190,700	$3,389
Oregon			54,360	1,087	32,000	320			86,360	1,407
California	283,514	$2,400	465,911	12,734	1,137,801	14,303	1,234,320	$61,814	3,121,546	91,251
Total	283,514	2,400	625,971	15,935	1,254,801	15,898	1,234,320	61,814	3,398,606	96,047
1904—Washington			6,000	300	125,287	1,753			131,287	2,053
Oregon	20,000	200	180,000	6,000	36,846	1,433			236,846	7,633
California	70,374	1,407	737,144	20,992	327,372	9,960	1,570,404	92,116	2,705,294	124,475
Total	90,374	1,607	923,144	27,292	489,505	13,146	1,570,404	92,116	3,073,427	134,161
1908—Washington					100,000	1,900			100,000	1,900
Oregon	30,000	300	201,000	9,000	431,000	8,000			662,000	17,300
California	427,000	4,300	1,069,000	56,000	1,169,000	12,000	1,776,000	135,000	4,441,000	207,300
Total	457,000	4,600	1,270,000	65,000	1,700,000	21,900	1,766,000	135,000	5,203,000	226,500
1915—Washington	200,000	4,000			96,298	1,164			296,298	5,164
Oregon	50,000	750			488,625	4,945			538,625	5,695
California	350,815	6,366	517,054	24,299	6,858,008	67,107	1,784,448	146,928	9,510,325	244,700
Total	600,815	11,116	517,054	24,299	7,442,931	73,216	1,784,448	146,928	10,345,248	255,559
1922—Washington	375,160	12,054			48,039	769			423,199	12,823
Oregon					578,003	11,332			578,003	11,332
California	55,054	1,649	7,361	1,005	1,133,270	55,513	678,820	62,747	1,874,505	120,914
Total	430,214	13,703	7,361	1,005	1,759,312	67,614	678,820	62,747	2,875,707	145,069

[1] The statistics for 1908 in this table are from data published by the Bureau of the Census.

SALMON CANNING

In 1922 the salmon-canning industry was the most important of the fish-canning industries of the Pacific Coast States, producing 745,751 cases of salmon, valued at $8,716,164. The chinook was the most important species, representing nearly 53 per cent in value of the entire salmon pack. Following the chinook, in order of importance, were blueback or sockeye, silver or coho, chum or keta, steelhead, and humpback or pink.

The following table gives the statistics for 1922 on this industry. Of the 58 canneries listed 16 were engaged in other branches of the canning or packing trade also. In two of them salmon canning was merely incidental. All of the products in the table were reduced to the basis of forty-eight 1-pound cans to the case.

Salmon-canning industry of the Pacific Coast States in 1922

Items	Washington		Oregon and California		Total	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*
Canneries	34	$3,110,084	24	$1,577,470	58	$4,687,554
Cash capital		305,800		110,100		415,900
Persons engaged	1,552		977		2,529	
Wages paid		721,381		602,154		1,323,535
PRODUCTS						
Blueback or sockeye—cases	84,640	1,580,673	13,287	236,228	97,927	1,816,901
Chinook—do	119,724	1,696,119	198,013	2,897,509	317,737	4,593,628
Chum—do	83,090	345,570	5,015	21,922	88,105	367,492
Humpback or pink—do	3,551	18,546			3,551	18,546
Silver—do	143,499	1,079,668	69,135	512,935	212,634	1,592,603
Steelhead trout—do	7,163	102,598	18,634	224,396	25,797	326,994
Total	441,667	4,823,174	304,084	3,892,990	745,751	8,716,164

Comparative statistics, by States, of the number of cases of salmon canned in the Pacific Coast States in certain years, from 1892 to 1922

States	Blue-back	Chinook	Chum	Hump-back	Silver	Steel-head trout	Total
1892—Washington	19,441	134,253	29,411		28,708	26,945	238,758
Oregon	51,106	237,684			60,293	45,403	394,486
California		14,334			1,550		15,884
Total	70,547	386,271	29,411		90,551	72,348	649,128
1893—Washington	55,237	129,078	23,480	17,530	31,707	25,663	282,695
Oregon	23,074	176,024	9,230		62,913	39,563	310,804
California		26,436			500		26,936
Total	78,311	331,538	32,710	17,530	95,120	65,226	620,435
1894—Washington	53,717	156,549	33,952	9,049	32,118	23,209	308,594
Oregon	25,523	216,507	3,162		100,087	38,829	384,108
California		31,663			500		32,163
Total	79,240	404,719	37,114	9,049	132,705	62,038	724,865
1895—Washington	70,304	157,187	48,686	23,633	81,957	18,985	400,752
Oregon	12,854	316,284	27,027		138,981	30,693	525,839
California		28,635			400		29,035
Total	83,158	502,106	75,713	23,633	221,338	49,678	955,626
1899—Washington	503,950	95,147	42,656	252,733	145,139	2,258	1,041,883
Oregon	19,665	214,821	18,345		78,730	9,736	341,297
California		34,180					34,180
Total	523,615	344,148	61,001	252,733	223,869	11,994	1,417,360
1904—Washington	112,911	140,695	94,265		168,069	3,050	518,990
Oregon	9,264	223,646	15,150		65,557	6,818	320,435
California		17,807					17,807
Total	122,175	382,148	109,415		233,626	9,868	857,232
1908—Washington							460,229
Oregon							340,396
California							3,938
Total							804,563
1915—Washington	91,720	178,464	450,409	590,378	206,508	10,270	1,527,749
Oregon	4,510	292,765	40,728		53,405	18,783	410,191
California		19,508			3,578		23,086
Total	96,230	490,737	491,137	590,378	263,491	29,053	1,961,026
1922—Washington	84,640	119,724	83,090	3,551	143,499	7,163	441,667
Oregon and California	13,287	198,013	5,015		69,135	18,634	304,084
Total	97,927	317,737	88,105	3,551	212,634	25,797	745,751

FISHERY PRODUCTS EXCLUSIVE OF FRESH, FROZEN, AND CANNED FISH

The production of dried, salted, smoked, and miscellaneous products, other than fresh, frozen, and canned fish, in the Pacific Coast States in 1922 amounted to 63,716,144 pounds, valued at $3,979,043. Most important of these products was the mild-cured fish, of which 6,798,470 pounds, valued at $1,515,266, were produced. This is a small increase in quantity and a large increase in value as compared with 1915, when 6,032,727 pounds, valued at $713,527, were produced. The various species of salmon constituted 97 per cent of the fish cured in this manner, the remainder being shad.

The production of smoked fish, of which kippered salmon was by far the most, important item, amounted to 2,730,858 pounds, valued at $422,073. The dried and salted fish products were of minor importance.

Fish scrap and meal, including that from whales, totaled 37,550,000 pounds, valued at $1,109,812, making it the most important by-product of the fisheries. The production of fish oil amounted to 1,925,085 gallons, valued at $712,837. The pronounced growth of

the by-products industry may be realized when the production of 1922 is compared with that of 1915, when only 6,668,000 pounds of fish scrap and meal, valued at $139,035, and 266,812 gallons of fish oil, valued at $79,103, were produced.

The following table gives the detailed statistics of the above-mentioned products:

Quantity and value of various fishery products prepared, exclusive of canning, in the Pacific Coast States in 1922

Methods and products	Washington		Oregon		California		Total	
DRIED	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Barracuda					65,000	$4,650	65,000	$4,650
Rockfishes and Spanish mackerel					12,000	840	12,000	840
Sardines					600	120	600	120
Sea bass					61,000	4,435	61,000	4,435
Yellowtail					105,000	8,450	105,000	8,450
Total					243,600	18,495	243,600	18,495
MILD-CURED								
Salmon:								
Chinook			686,620	$223,327			686,620	223,327
Miscellaneous	4,059,750	$956,930	250,000	40,000	1,602,200	275,390	5,911,950	1,272,320
Shad			72,000	6,300	127,900	13,319	199,900	19,619
Total	4,059,750	956,930	1,008,620	269,627	1,730,100	288,709	6,798,470	1,515,260
SALTED								
Anchovies					6,400	256	6,400	256
Mackerel					20,000	1,300	20,000	1,300
Sablefish	50,000	5,000					50,000	5,000
Salmon:								
Chinook			28,850	5,710			28,850	5,710
Silver			26,500	2,730			26,500	2,730
Mixed			31,000	2,325	32,600	3,260	63,600	5,585
Salmon eggs			300	60			300	60
Sardines					381,700	31,370	381,700	31,370
Sardines (Salacchini)					80,000	32,000	80,000	32,000
Yellowtail					52,730	5,873	52,730	5,873
Miscellaneous species					3,000	60	3,000	60
Total	50,000	5,000	86,650	10,825	576,430	74,119	713,080	89,944
SMOKED								
Bonito					24,000	1,200	24,000	1,200
Cod (kippered)	176,457	28,562					176,457	28,562
Herring	89,009	7,431					89,009	7,431
Sablefish					98,760	7,550	98,760	7,550
Salmon:								
Chinook			60,868	21,690			60,868	21,690
Mixed	145,746	21,804	7,154	2,146	1,086	184	153,986	24,134
Mixed (kippered)	2,114,978	328,946					2,114,978	328,946
Sardines					12,800	2,560	12,800	2,560
Total	2,526,190	386,743	68,022	23,836	136,646	11,494	2,730,858	422,073
MISCELLANEOUS								
Fish scrap and meal dried	17,382,000	551,770	200,000	5,000	19,968,000	553,042	37,550,000	1,109,812
Oil:								
Salmon			97,500	4,420			[1] 97,500	4,420
Sardine					3,216,442	145,868	[2] 3,216,442	145,868
Tuna					645,742	23,617	[3] 645,742	23,617
Sperm	260,625	12,163			37,875	2,525	[4] 298,500	14,688
Whale	1,762,500	94,000			6,862,500	366,000	[5] 8,625,000	460,000
Miscellaneous	1,306,762	53,736			248,190	10,508	[6] 1,554,952	64,244
Total	3,329,887	159,899	97,500	4,420	11,010,749	548,518	[7] 14,438,136	712,837
Other products [8]					1,242,000	110,616	1,242,000	110,616
Grand total	27,347,827	2,060,342	1,460,792	313,708	34,907,525	1,604,993	63,716,144	3,979,043

[1] 13,000 gallons.
[2] 428,859 gallons.
[3] 86,099 gallons.
[4] 39,800 gallons.
[5] 1,150,000 gallons.
[6] 207,327 gallons.
[7] 1,925,085 gallons.
[8] Includes agar-agar, whalebones (skeletons), whale tails, and abalone jewelry.

NOTE.—The statistics of by-products for Washington in the above table have been revised in accordance with reports received since the publication of Statistical Bulletin No. 570, entitled "Canned Fishery Products and By-products of the United States and Alaska, 1922," resulting in a considerable increase in the quantity and value of fish scrap and meal, dried, and miscellaneous oil.

FISHERIES OF WASHINGTON

The fisheries of Washington in 1922 employed 7,600 persons, 404 vessels, 1,158 power boats, and 248 sail and row boats. The investment in vessels, boats, gear, and shore property amounted to $10,711,500, and the products of the fisheries amounted to 69,469,805 pounds, valued at $4,953,913 to the fishermen.

The various species of salmon were the most important of Washington's fishes, yielding 37,355,667 pounds, valued at $2,179,112. Chinook salmon ranked highest in value, yielding 10,969,802 pounds, valued at $946,422, and silver salmon ranked highest in quantity, yielding 14,816,994 pounds, valued at $546,495. It is estimated that about 83 per cent of the salmon catch was canned, 10 per cent mild cured, salted, and smoked, and the remainder sold fresh or frozen.

Next to salmon in importance is the halibut. The fleet of halibut vessels registered and sailing from ports in Washington caught 18,467,422 pounds, valued at $1,904,915. Of this catch 9,011,333 pounds, valued at $993,622, were landed in the State of Washington, 1,348,213 pounds, valued at $108,054, in Alaska, and 7,936,700 pounds, valued at $786,528, in British Columbia. Practically all of the halibut is sold fresh or frozen and is shipped to many distant points in the United States. The following table gives statistics showing the landings of halibut in Washington, Alaska, and British Columbia by vessels registered in the State of Washington:

Landings of halibut, by counties, by vessels registered in the State of Washington

Counties	Alaska		British Columbia		Washington		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Clallam					27,500	$2,704	27,500	$2,704
Island					2,600	256	2,600	256
King	1,210,366	$95,182	6,194,900	$610,508	7,811,306	870,788	15,216,572	1,576,478
Kitsap	9,747	576	233,500	22,952	440,800	47,150	684,047	70,678
Pacific					3,000	308	3,000	308
Pierce	128,100	12,296	1,508,300	153,068	720,450	71,962	2,356,850	237,326
Skagit					5,677	454	5,677	454
Total	1,348,213	108,054	7,936,700	786,528	9,011,333	993,622	18,296,246	1,888,204

The cod fishery, next in importance to the halibut fishery, was for the most part carried on by a few large vessels sailing from ports in the State of Washington to the cod banks in Alaskan waters, where they fished during the summer months, bringing back their cargoes of salted cod at the end of the season. In this year 1,175,875 pounds of salted cod, valued at $86,395, were reported, which is estimated to be the equivalent of about 2,940,000 pounds of fresh cod. In addition to the salted cod there were 72,741 pounds of fresh cod, valued at $2,182. This makes a total of about 3,000,000 pounds on the fresh basis, as compared with 13,745,710 pounds on the fresh basis reported for 1915.

The production of other fish in 1922 was 4,408,733 pounds, valued at $158,772, of which sablefish, steelhead trout, smelts, and carp were most important.

The production of shellfish amounted to 4,836,242 pounds, valued at $486,194. The item contributing most to the value of the shellfish was the oyster, of which 442,981 pounds, valued at $310,053, were produced. The razor clam, largely used in canning, amounted to 2,636,351 pounds, valued at $106,905 to the fishermen. The catch of other shellfish, including hard clams, crabs, shrimp, and octopus, amounted to 1,756,910 pounds, valued at $69,236.

The products of the whale fishery, which is prosecuted by vessels operating from shore stations, amounted to 3,153,125 pounds, valued at $136,343, and consisted largely of oil, scrap, and meal. In 1915 whale products amounting to 3,933,125 pounds, valued at $141,441, were reported.

The counties bordering on Puget Sound support the most important fisheries, producing 49,755,483 pounds, in 1922, valued at $3,810,646. Practically all of the halibut, cod, sablefish, and other marine fishes caught by fishermen of these counties are taken on the banks of the North Pacific Ocean, from the State of Washington north to Alaska. The salmon is fished to a great extent in Puget Sound.

King County, with the important port of Seattle, is by far the most important in the Puget Sound district as well as in the State. In 1922 there were 1,733 persons engaged, an investment of $3,346,812, and a production of 24,825,865 pounds of fishery products, valued at $2,066,694. Based on the value of products, this amounts to over two-fifths of the State's total production and is six times as great as the production of any other county. Halibut was the most important fishery resource, yielding 15,216,793 pounds, valued at $1,576,499; the various species of salmon were next in importance, yielding 7,676,472 pounds, valued at $376,502; while cod, sablefish, and other less important marine products made up the balance of fishery production in this county.

Whatcom was second to King County in the value of fishery products, yielding 7,228,672 pounds, valued at $486,871, practically all of which consisted of salmon, although quantities of herring, smelts, steelhead trout, and crabs were caught also. Pierce County, with its important port of Tacoma, produced 7,629,580 pounds of fishery products, valued at $479,882. Salmon and halibut were the most valuable of her fishes, though other marine fish, smelts, hard clams, and shrimps were caught in limited quantities also. Thurston County's production of 334,953 pounds, valued at $210,288, consisted almost exclusively of oysters, with a few fish, shrimp, and hard clams making up the remainder of the catch.

Kitsap County produced 3,077,109 pounds of products, valued at $168,795, the major portion of which consisted of salmon and halibut. A few marine fish, smelts, and crabs made up the remainder. Skagit County produced 2,943,424 pounds, valued at $144,452. Salmon was the most important product, although there was a considerable quantity of cod, other fish, and crabs. Island County produced principally salmon, its entire production amounting to 1,835,836 pounds, valued at $113,146. Each of the remaining counties bordering Puget Sound produced less than $100,000 worth of fishery products. San Juan and Snohomish Counties produced chiefly salmon, although the latter included in its production a goodly quantity of crabs, while Mason County's production consisted almost exclusively of oysters.

Clallam County, with its seaboard on Puget Sound and the Pacific Ocean, produced 2,910,070 pounds of fishery products, valued at $172,276. Most of the catch consisted of salmon, with a limited quantity of halibut, crabs, and hard clams.

The seacoast counties of Washington produced 12,936,092 pounds of fishery products, valued at $732,098, which constitute about one-sixth of the production of the State. Grays Harbor County was most important, producing 8,782,595 pounds, valued at $405,170. About half of this catch was salmon, one-third was whale products, and one-sixth razor clams, with a limited amount of other fish and crabs. Pacific County was accredited with the production of 3,772,374 pounds, valued at $316,951, about two-thirds of which was salmon, one-sixth oysters, one-tenth razor clams, and the remainder steelhead trout, sturgeon, and crabs. Jefferson County produced 381,123 pounds, valued at $9,977, consisting chiefly of salmon, hard clams, and razor clams.

The counties bordering on the Columbia River produced 3,652,926 pounds, valued at $228,726, which was approximately 4 per cent of the State's production. Salmon, steelhead trout, a few sturgeon, and smelts constituted the bulk of this production. Wahkiakun County was the leading Columbia River county, with a production of 1,072,131 pounds, valued at $101,749.

Other counties in the interior of Washington produced approximately $10,000 worth of fishery products, consisting mostly of carp and salmon.

The following tables give in detail the statistics of the fisheries of Washington in 1922.

Persons engaged, investment, and products of the fisheries of Washington in 1922 by counties

Items	Clallam		Clarke		Cowlitz		Grays Harbor	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing	18						42	
On vessels transporting					3		11	
In shore or boat fisheries	165		87		112		608	
Shoresmen	48				19		391	
Total	231		87		134		1,052	
INVESTMENT								
Vessels, fishing, steam							3	$90,000
Tonnage							195	
Outfit								15,000
Vessels, fishing, gasoline	9	$15,800					8	11,750
Tonnage	67						59	
Outfit		3,718						1,285
Vessels, transporting, gasoline					2	$4,500	5	24,500
Tonnage					15		65	
Outfit						2,000		4,000
Power boats	77	69,300	44	$32,500	81	61,800	80	38,175
Rowboats	3	150	2	100			109	4,475
Apparatus, vessel fisheries:								
Hoop nets							50	150
Lines		595						45
Whaling apparatus								3,600
Apparatus, shore fisheries:								
Haul seines			3	1,200				
Length in yards			500					
Gill nets	23	1,725	49	6,264	71	8,382	176	10,105
Length in yards	2,300		15,791		20,935		23,351	
Pound nets					13	10,200	32	105,215
Hoop nets							280	840
Pots	280	840						
Lines		3,195						170
Drag-bag nets					31	155		
Tongs, forks, hoes, etc		18						592
Shore and accessory property		45,600		3,500		39,899		422,960
Cash capital		5,000				1,500		60,000
Total		145,941		43,564		128,436		792,862
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp			215,140	$6,454				
Cod: Fresh	3,370	$118						
Halibut	100,176	9,836						
"Lingcod"	147	3						
Salmon:								
Blueback or sockeye			74,384	9,670	163,157	$19,693	1,350,000	$121,500
Chinook	1,362,355	108,837	138,581	16,630	308,467	37,014	648,750	32,515
Chum			7,935	80	94,805	949	748,505	7,014
Silver	1,314,252	49,413	7,949	278	150,205	5,255	917,752	27,605
Shad			8,060	81	10,692	111		
Smelt			15,450	155	1,137,452	11,376		
Steelhead trout	10,296	824	23,069	1,615	66,597	5,071	5,656	395
Sturgeon			15,190	1,064	28,359	1,985	39,450	2,370
Crabs	39,247	2,192					111,473	6,132
Clams:								
Hard	68,230	1,023						
Razor							1,807,884	71,296
Octopus	11,997	30						
Sperm oil							260,625	12,163
Whale oil							1,762,500	94,000
Other whale products							1,130,000	30,180
Total	2,910,070	172,276	505,758	36,027	1,959,734	81,454	8,782,595	405,170

Persons engaged, investment, and products of the fisheries of Washington in 1922, by counties—Continued

Items	Island		Jefferson		King		Kitsap	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing	13				930		172	
On vessels transporting					66		3	
In shore or boat fisheries	91		102		297		141	
Shoresmen			22		440		17	
Total	104		124		1,733		333	
INVESTMENT								
Vessels, fishing, gasoline	4	$7,000			140	$776,700	33	$103,000
Tonnage	30				2,652		463	
Outfit		2,100				516,250		29,450
Vessels, fishing, sail					2	30,000		
Tonnage					563			
Outfit						19,348		
Vessels, transporting, gasoline					21	136,300	1	1,200
Tonnage					382		9	
Outfit						79,472		350
Power boats	36	22,850	11	$4,550	104	89,950	55	31,650
Rowboats	10	500	1	50	42	2,100	1	35
Apparatus, vessel fisheries:								
Purse seines	1	1,200			30	36,000	22	32,400
Length, in yards	600				18,000		13,200	
Haul seines					3	215	1	72
Length, in yards					177		85	
Beam trawls							1	400
Drag-bag nets	1	250			2	900	1	250
Lines		105				60,700		4,255
Apparatus, shore fisheries:								
Haul seines	9	997	1	63	8	482	21	972
Length, in yards	800		25		615		1,752	
Gill nets					19	4,060	4	505
Length, in yards					9,200		917	
Pound nets					22	154,936		
Pots	120	360			150	450	25	75
Lines		910		455		2,640		555
Drag-bag nets	4	1,000			1	250	11	2,750
Beam trawls			1	250	1	250	3	1,200
Tongs, forks, hoes, etc		6		136		14		99
Shore and accessory property		1,450		13,310		1,358,020		17,193
Cash capital				10,500		77,775		5,000
Total		38,728		29,314		3,346,812		231,411
PRODUCTS								
Cod:	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Fresh	354	$12			27,011	$815	28,294	$764
Salted					409,875	56,395		
Flounders	461	14			7,325	147	10,147	279
Grayfish					1,500	4	33	1
Halibut	25,600	2,517			15,216,793	1,576,499	716,047	73,824
Herring	67	1			81,872	819	65,447	655
"Lingcod"					211,690	4,244	9,200	122
Mackerel					1,360	95		
Perch					13,621	677	16,872	843
Rockfishes					39,600	1,785	1,000	20
Sablefish					1,002,100	42,184	2,000	40
Salmon:								
Blueback or sockeye					589,899	65,069	72,485	7,777
Chinook	935,340	74,841	27,420	$2,192	1,639,975	131,210	303,778	24,104
Chum	15,576	1,246			1,702,589	40,657	512,367	12,501
Humpback					20,223	729	3,765	134
Silver	766,434	28,007	25,726	954	3,723,786	138,837	843,727	32,462
Sea bass, white, or squeteague					40	3	41	3
Shad					218	22		
Skates					2,100	8	1,580	7
Smelt	67,754	5,420	1,625	130	3,837	307	62,832	5,027
Sole			460	14	27,408	822	92,772	2,787
Steelhead trout					26,677	1,867	56	4
Sturgeon					3,100	383		
Crabs	18,230	997			40,150	2,208	80	5
Shrimp							21,771	2,612
Clams:								
Hard	6,020	91	246,015	3,691	29,850	896	312,516	4,820
Razor			79,877	2,996				
Octopus					3,266	12	299	4
Total	1,835,836	113,146	381,123	9,977	24,825,865	2,066,694	3,077,109	168,795

Persons engaged, investment, and products of the fisheries of Washington in 1922, by counties—Continued

Items	Klickitat		Mason		Pacific		Pierce	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing			13		20		335	
On vessels transporting					8		13	
In shore or boat fisheries	9		45		539		91	
Shoresmen					157		26	
Total	9		58		724		465	
INVESTMENT								
Vessels fishing, gasoline			2	$4,500	7	$22,800	66	$310,850
Tonnage			25		61		1,068	
Outfit				900		3,150		85,200
Vessels transporting, gasoline					4	15,800	6	40,000
Tonnage					31		130	
Outfit						4,100		20,040
Power boats	8	$6,400	5	2,700	228	148,090	45	67,000
Rowboats			3	150	5	250	1	50
Apparatus, vessel fisheries:								
Purse seines			2	3,000	1	1,200	30	36,000
Length, in yards			1,200		600		18,000	
Beam trawls			2	500				
Hoop nets					40	120		
Lines				100		535		7,960
Apparatus, shore fisheries:								
Haul seines			5	315	2	2,400	2	250
Length, in yards			495		1,000		185	
Gill nets	7	410			96	31,658	3	1,435
Length, in yards	670				35,056		1,100	
Pounds nets	7	5,500			120	178,700		
Hoop nets					955	2,865		
Lines		70		100		1,725		1,385
Drag bag nets			1	250				
Wheels	1	2,500			1	2,500		
Beam trawls							2	500
Tongs, forks, hoes, etc				224		909		2
Shore and accessory property		2,000		18,600		293,171		264,800
Cash capital						12,600		10,800
Total		16,880		31,339		722,573		846,212
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod, fresh			549	$17			2,015	$71
Flounders			35	1			1,013	33
Grayfish							210	1
Halibut					3,000	$308	2,396,350	241,174
"Lingcod"							11,600	218
Perch			12,161	596			1,654	85
Rockfishes			120	4			2,110	106
Sablefish							17,600	642
Salmon:								
Blueback or sockeye	14,106	$1,834			234,670	30,400	210,644	23,390
Chinook	7,465	896			1,190,961	139,358	987,915	79,205
Chum	5,526	56	65,977	1,658	173,439	2,444	1,200,288	28,610
Humpback	5	1			163	7	16,451	606
Silver	14,221	498	17,713	626	800,479	28,155	2,753,350	103,968
Shad					18,992	191		
Skates			47	2				
Smelt			12,646	1,012			12,784	1,023
Sole			179	5			9,350	281
Steelhead trout	20,677	1,448			196,556	13,738	70	5
Sturgeon	8,154	571			82,044	5,794		
Crabs					253,480	13,943		
Shrimp			17,854	2,142			3,712	445
Clams:								
Hard							1,009	15
Razor					748,590	32,613		
Oysters:								
Native, market			76,286	52,239	70,000	50,000		
Native, seed			18,487	1,432				
Octopus							1,455	4
Total	70,154	5,304	222,054	59,734	3,772,374	316,951	7,629,580	479,882

Persons engaged, investment, and products of the fisheries of Washington in 1922, by counties—Continued

Items	San Juan		Skagit		Skamania		Snohomish		Thurston	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing	4		75				70		3	
On vessels transporting	6		29		2		14		2	
In shore or boat fisheries	40		177		18		41		53	
Shoresmen	60		145				306		51	
Total	110		426		20		431		109	
INVESTMENT										
Vessels fishing, gasoline	2	$4,500	6	$22,800			12	$61,500	2	$1,300
Tonnage	14		121				198		11	
Outfit		405		2,900				5,500		250
Vessels fishing, sail			1	16,300						
Tonnage			413							
Outfit				12,500						
Vessels transporting, gasoline	3	12,600	14	40,500	1	$1,500	3	16,800	2	2,800
Tonnage	54		168		8		58		17	
Outfit		3,150		9,970		500		2,300		650
Vessels transporting, sail							1	25,000		
Tonnage							17			
Outfit								2,300		
Power boats	23	12,000	127	53,050	6	2,100	30	10,250	9	4,685
Rowboats	3	145	16	655	11	550	3	150	5	250
Apparatus, vessel fisheries:										
Purse seines			4	4,400			9	15,000		
Length, in yards			2,000				5,400			
Haul seines			1	145						
Length, in yards			54							
Gill nets							1	185		
Length, in yards							250			
Otter trawls							1	1,000		
Beam trawls			1	500					1	50
Drag bag nets									1	200
Pots			80	240			200	600		
Lines		45		190						
Apparatus, shore fisheries:										
Haul seines	2	135	6	870			7	530	5	275
Length, in yards	255		322				630		367	
Gill nets			68	4,735	12	955	10	3,638		
Length, in yards			8,430		2,035		5,650			
Pound nets	4	28,000	14	39,200	1	1,000				
Pots			3,720	11,160			470	1,410		
Lines		320		325		35		45		
Drag bag nets			5	900			1	100	5	1,000
Reef nets	3	1,400								
Tongs, forks, hoes, etc		2		2						234
Shore and accessory property		73,581		257,853		2,500		265,176		72,517
Cash capital		10,500		20,600				21,500		11,000
Total		146,783		499,795		9,140		432,984		95,211
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod:										
Fresh	5,844	$205	1,369	$42			3,935	$138		
Salted			766,000	30,000						
Dolly Varden trout							300	48		
Flounders			135	3			66,095	1,977		
Grayfish			250	1						
Halibut	3,409	273	6,047	484						
Herring	1,075	11	4,000	40			5,980	60		
"Lingcod"	773	15	2,609	52						
Perch			1,100	138			5,199	261	320	$16
Rockfishes	8,496	408					400	28		
Salmon:										
Blueback or sockeye	81,109	8,759	112,420	12,319	9,625	$1,252	15,729	1,738		
Chinook	262,740	21,019	607,660	48,612	17,480	2,086	58,340	4,667		
Chum	5,614	164	313,560	7,418	5,144	51	370,742	8,767		
Humpback	22,697	856	4,848	177			186	7		
Silver	246,329	9,416	827,140	31,098	1,428	50	344,441	13,012		
Sea bass, white, or squeteague	100	8					415	33		

Persons engaged, investment, and products of the fisheries of Washington in 1922, by counties—Continued

Items	San Juan		Skagit		Skamania		Snohomish		Thurston	
PRODUCTS—con.	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Shad					5,150	$314				
Skates							500	$10		
Smelt			25,329	$2,047			14,627	1,830	31,648	$2,532
Sole							717	22		
Steelhead trout	424	$34	7,452	682	1,352	92				
Sturgeon					4,970	347				
Crabs			249,080	9,999			119,500	6,574		
Shrimp			10,811	1,297			1,030	124	6,822	819
Clams, hard	10,650	319	1,000	30					17,955	539
Oysters:										
Eastern, market									45,710	24,416
Native, market									231,392	181,808
Native, seed									1,106	158
Octopus	594	1	2,614	13						
Total	649,854	41,488	2,943,424	144,452	45,149	4,192	1,008,136	39,296	334,953	210,288

Items	Wahkiakum		Whatcom		Other counties [1]		Total	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing			116				1,811	
On vessels transporting	12		68				237	
In shore or boat fisheries	287		186		20		3,109	
Shoresmen	166		595				2,443	
Total	465		965		20		7,600	
INVESTMENT								
Vessels, fishing, steam							3	$90.000
Tonnage							195	
Outfit								15,000
Vessels, fishing, gasoline			16	$77,200			307	1,419,700
Tonnage			390				5,159	
Outfit				7,580				658,688
Vessels, fishing, sail							3	46,300
Tonnage							976	
Outfit								31,848
Vessels, transporting, steam			5	56,500			5	56,500
Tonnage			138				138	
Outfit				15,999				15,999
Vessels, transporting, gasoline	6	$16,000	17	99,318			85	411,818
Tonnage	62		335				1,334	
Outfit		11,150		34,512				172,194
Vessels, transporting, sail							1	25,000
Tonnage							17	
Outfit								2,300
Power boats	156	113,400	21	10,500	12	$5,250	1,158	786,200
Rowboats	6	300	27	1,400			248	11,310
Apparatus, vessel fisheries:								
Purse seines			16	21,800			115	151,000
Length, in yards			9,600				68,600	
Haul seines							5	432
Length, in yards							316	
Gill nets							1	185
Length, in yards							250	
Otter trawls							1	1,000
Beam trawls							5	1,450
Drag bag nets							5	1,600
Hoop nets							90	270
Pots			200	600			480	1,440
Lines								74,470
Whaling apparatus								3,600
Apparatus, shore fisheries:								
Haul seines			4	325	8	1,315	83	10,129
Length, in yards			403		1,419		8,768	
Gill nets	144	20,608	1	150			683	94,630
Length, in yards	51,344		600				177,379	
Pound nets	29	36,400	28	207,395			270	766,546
Hoop nets							1,235	3,705
Pots			680	2,040			5,445	16,335

[1] Includes Asotin, Garfield, Grant, Okanogan, Walla Walla, and Whitman Counties.

Persons engaged, investment, and products of the fisheries of Washington in 1922, by counties—Continued

Items	Wahkiakum		Whatcom		Other counties [1]		Total	
INVESTMENT—continued								
Apparatus, shore fisheries—Con.	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Lines		$10		$5		$50		$11,995
Drag bag nets	1	5	2	400			62	6,810
Wheels							2	5,000
Beam trawls							7	2,200
Reef nets							3	1,400
Wiers			1	800			1	800
Tongs, forks, hoes, etc								2,238
Shore and accessory property		341,154		1,895,349				5,388,633
Cash capital		51,000		125,000				422,775
Total		590,027		2,556,873		6,615		10,711,500
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp					160,020	$5,600	375,160	$12,054
Cod:								
Fresh							72,741	2,182
Salted							1,175,875	86,395
Dolly Varden trout							300	48
Flounders							85,211	2,454
Grayfish	4,366	$15					6,359	22
Halibut							18,467,422	1,904,915
Herring			101,897	$1,019			260,338	2,605
"Lingcod"							236,019	4,654
Mackerel							1,360	95
Perch							50,927	2,616
Rockfishes							51,726	2,351
Sablefish							1,021,700	42,866
Salmon:								
Blueback or sockeye	56,976	7,416	2,100,073	230,449	19,103	2,477	5,104,380	543,743
Chinook	633,638	76,046	1,836,897	146,946	2,040	244	10,969,802	946,422
Chum	35,681	358	1,061,875	25,215	185	2	6,319,808	137,190
Humpback	170	6	76,175	2,739			144,683	5,262
Silver	163,470	5,724	1,883,515	70,609	15,077	528	14,816,994	546,495
Sea bass, white, or squeteague							596	47
Shad	4,927	50					48,039	769
Skates							4,227	27
Smelt	1,100	13	5,332	618			1,392,416	31,488
Sole							130,886	3,931
Steelhead trout	92,633	6,481	12,708	1,017	11,464	802	475,687	34,075
Sturgeon	79,170	5,642			7,345	514	267,782	18,670
Crabs			150,200	8,259			981,440	50,309
Shrimp							62,000	7,439
Clams:								
Hard							693,245	11,424
Razor							2,636,351	106,905
Oysters:								
Eastern, market							45,710	24,416
Native, market							377,678	284,047
Native, seed							19,593	1,590
Octopus							20,225	64
Sperm oil							260,625	12,163
Whale oil							1,762,500	94,000
Other whale products							1,130,000	30,180
Total	1,072,131	101,749	7,228,672	486,871	215,234	10,167	69,469,805	4,953,913

VESSEL FISHERIES

In 1922 Washington's fisheries employed 313 fishing craft of 5 tons net and over, as measured by the United States Customs Service. This included 3 steamers, totaling 195 net tons, 307 gasoline vessels, totaling 5,159 net tons, and 3 sailing vessels, totaling 976 net tons, engaged in the fisheries of Washington, but does not include transporting vessels engaged principally in the carrying of fish. The total yield of fishing vessels was 36,013,631 pounds, valued at $2,657,390.

Lines, catching practically all of the halibut and cod and a considerable quantity of salmon, were the most important apparatus employed by fishing vessels, catching altogether 23,625,811 pounds

of fish, valued at $2,190,465. Purse seines follow lines in importance, yielding 8,905,735 pounds of fish, valued at $315,108, practically all of which were salmon. The whale fishery, located in Grays Harbor County, yielded 3,153,125 pounds of whale products, valued at $136,343. Haul seines, gill nets, otter trawls, drag bag nets, beam trawls, hoop nets, and pots, which constitute the remainder of apparatus employed on vessels, yielded 283,960 pounds, valued at $15,474.

The following table shows, by counties, species, and apparatus, the yield of the vessel fisheries of Washington in 1922:

Yield of the vessel fisheries of Washington in 1922, by counties, species, and apparatus

Species	Clallam		Grays Harbor		Island		King	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:								
Cod							224	$7
Flounders							706	14
Perch							2,858	143
Salmon—								
Blueback or sockeye							108,628	11,903
Chinook							10,560	846
Chum					15,576	$1,246	1,225,846	29,374
Humpback							2,571	94
Silver					33,013	1,221	759,004	29,110
Sole							681	20
Steelhead trout							84	6
Total					48,589	2,467	2,111,162	71,517
Haul seines:								
Cod							40	1
Herring							12,745	128
Perch							530	27
Smelt							812	55
Total							14,127	221
Lines:								
Cod—								
Fresh							5,300	59
Salted							409,875	56,395
Halibut	27,500	$2,704			2,600	256	15,216,572	1,576,478
"Lingcod"							211,650	4,243
Rockfishes							39,600	1,785
Sablefish							1,002,100	42,184
Salmon—								
Chinook	311,320	24,906	18,140	$907	146,600	11,728	164,025	13,115
Silver	372,750	13,790	21,582	719	85,260	3,185	192,155	7,295
Sturgeon							2,750	330
Total	711,570	41,400	39,722	1,626	234,460	15,169	17,244,027	1,701,884
Drag bag nets:								
Flounders							147	3
Herring							58,927	589
Mackerel							1,360	95
Perch							465	23
Smelt					247	20	746	60
Total					247	20	61,645	770
Hoop nets and pots: Crabs			20,430	1,124				
Harpoons:								
Sperm oil			260,625	12,163				
Whale oil			1,762,500	94,000				
Other whale products			1,130,000	30,180				
Total			3,153,125	136,343				
Grand total	711,570	41,400	3,213,277	139,093	283,296	17,656	19,430,961	1,774,392

Yield of the vessel fisheries of Washington in 1922, by counties, species, and apparatus—Continued

Species	Kitsap		Mason		Pacific		Pierce		San Juan	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:										
Salmon—										
Blueback or sockeye	70,875	$7,599			5,474	$605	192,745	$21,413		
Chinook	15,460	1,288			3,240	259	31,240	2,707		
Chum	512,193	12,497	65,977	$1,658	51,917	1,229	1,188,324	28,090		
Humpback	3,551	126			163	7	15,845	584		
Silver	397,314	15,258	17,713	626	18,217	655	1,935,265	73,626		
Steelhead trout	56	4					70	5		
Total	999,449	36,772	83,690	2,284	79,011	2,755	3,363,489	126,425		
Haul seines:										
Cod	484	17								
Flounders	74	2								
Grayfish	33	1								
Perch	1,089	54								
Sole	153	5								
Total	1,833	79								
Lines:										
Cod—										
Fresh	14,334	287	347	10						
Flounders	1,860	59								
Halibut	684,047	70,678			3,000	308	2,356,850	237,326		
"Lingcod"	9,200	122					11,600	218		
Rockfishes	1,000	20								
Sablefish	2,000	40					17,600	642		
Salmon—										
Chinook	234,638	18,521			99,817	8,307	353,605	28,255	90,000	$7,200
Silver	284,959	11,050			117,315	4,218	306,855	11,418	32,929	1,219
Skates	734	3								
Total	1,232,772	100,780	347	10	220,132	12,833	3,046,510	277,859	122,929	8,419
Drag-bag nets:										
Herring	1,116	11								
Smelt	96	8								
Total	1,212	19								
Beam trawls: Shrimp	3,287	394	17,854	2,142						
Hoop nets and pots:										
Crabs					26,980	1,484				
Grand total	2,238,553	138,044	101,891	4,436	326,123	17,072	6,409,999	404,284	122,929	8,419

Yield of the vessel fisheries of Washington in 1922, by counties, species, and apparatus—Continued

Species	Skagit		Snohomish		Thurston		Whatcom		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:										
Cod									224	$7
Flounders			1,656	$50					2,362	64
Perch			335	17					3,193	160
Salmon—										
Blueback or sockeye	31,101	$3,435					34,429	$3,801	443,252	48,756
Chinook	4,040	323	37,400	2,992			5,720	452	107,660	8,867
Chum	211,066	4,996	360,540	8,534			618,779	14,626	4,250,218	102,250
Humpback	676	27					744	25	23,550	863
Silver	108,079	4,113	310,571	11,723			495,185	17,772	4,074,361	154,104
Sole									681	20
Steelhead trout							24	2	234	17
Total	354,962	12,894	710,502	23,316			1,154,881	36,678	8,905,735	315,108
Haul seines:										
Cod									524	18
Flounders									74	2
Grayfish									33	1
Herring	4,000	40							16,745	168
Perch									1,619	81
Smelt									812	65
Sole									153	5
Total	4,000	40							19,960	340
Gill nets:										
Salmon—										
Chinook			260	21					260	21
Chum			8,131	184					8,131	184
Silver			348	13					348	13
Total			8,739	218					8,739	218
Lines:										
Cod—										
Fresh	519	12							20,500	368
Salted	766,000	30,000							1,175,875	86,395
Flounders	135	3							1,995	62
Grayfish	250	1							250	1
Halibut	5,677	454							18,296,246	1,888,204
"Lingcod"	761	15							233,211	4,598
Rockfishes									40,600	1,805
Sablefish									1,021,700	42,866
Salmon—										
Chinook									1,418,145	112,939
Silver									1,413,805	52,894
Skates									734	3
Sturgeon									2,750	330
Total	773,342	30,485							23,625,811	2,190,465
Otter trawls:										
Cod			3,800	133					3,800	133
Flounders			59,398	1,782					59,398	1,782
Rockfishes			400	28					400	28
Skates			500	10					500	10
Total			64,098	1,953					64,098	1,953
Drag-bag nets:										
Flounders									147	3
Herring									60,043	600
Mackerel									1,360	95
Perch									465	23
Smelt					4,615	$369			5,704	457
Total					4,615	369			67,719	1,178
Beam trawls: Shrimp	10,811	1,297			6,822	819			38,774	4,652
Hoop nets and pots:										
Crabs	18,620	1,024	33,900	1,865			29,740	1,636	129,670	7,133
Harpoons:										
Sperm oil									260,625	12,163
Whale oil									1,762,500	94,000
Other whale products									1,130,000	30,180
Total									3,153,125	136,343
Grand total	1,161,735	45,740	817,239	27,352	11,437	1,188	1,184,621	38,314	36,013,631	2,657,390

SHORE AND BOAT FISHERIES

Included in the statistics on shore and boat fisheries is the catch by all fishing craft of less than 5 tons net, as measured by the United States Customs Service, as well as all fish caught without the use of boats. In 1922 there were 1,158 power boats and 248 rowboats employed in the fisheries of Washington. The yield of boat and shore fisheries amounted to 33,456,174 pounds, valued at $2,296,523, which is slightly less than the yield of the vessel fisheries.

The largest catch, 14,340,781 pounds, valued at $957,450, was made by pound nets. The various species of salmon and steelhead trout constituted by far the greater portion of this catch, although cod, flounders, halibut, lingcod, sea bass, shad, skates, sturgeon, and octopus were also taken in small quantities.

Next to the pound nets, in value of yield, were the forks, tongs, etc., used in the clam and oyster fishery. The yield of these implements totaled 3,772,577 pounds, valued at $428,382, of which 3,329,596 pounds, valued at $118,329, were clams and 442,981 pounds, valued at $310,053, were oysters, both native and eastern.

Exceeding the yield of forks, tongs, etc., in amount but not value, was the yield of the gill nets, amounting to 5,312,069 pounds, valued at $403,334, of which the salmons and steelhead trout were the greater part. Of the other fish caught by gill nets, sturgeon, shad, and smelts were most important.

The catch by lines exceeded that by gill nets in amount but not in value, totaling 6,724,127 pounds, valued at $382,632, most of which was salmon. Among the other fish caught by lines halibut was most important, yielding 170,985 pounds, valued at $16,694.

The catch by haul seines amounted to 922,954 pounds, valued at $48,997. Of this amount 208,864 pounds, valued at $19,023, consisted of salmon and steelhead trout; 159,419 pounds, valued at $13,574, were smelts; and 375,160 pounds, valued at $12,054, were carp. Other species of lesser importance were also caught by haul seines.

Drag bag nets appeared in the statistics for the first time in 1922. This net may be described as a haul seine with a bag in the center, the bag being usually 40 feet long and the wings or leads from 120 to 900 feet long. One end is usually staked down, while the other is fastened to the boat, which makes a circle around and then hauls in. Sometimes each end of the net is fastened to a boat to make a haul. When used in this manner, this net greatly resembles a long-haul seine or sweep net recently developed in the North Carolina fisheries. The catch by drag bag nets in the shore and boat fisheries in 1922 amounted to 1,303,788 pounds, valued at $19,735, most of which was smelts. The drag bag net was used in the vessel fishery also, where its products consisted largely of herring, as shown in the previous section.

Hoop nets and pots yielded 851,770 pounds of crabs, valued at $43,176. The yield by fish wheels, reef nets, beam trawls, and wiers, none of which contributed products valued in excess of $7,000, makes up the remainder of the catch in the shore fisheries.

The following tables show, by counties and species, the catch of each kind of apparatus used in the shore and boat fisheries.

Yield of the shore fisheries of Washington in 1922, by counties, species, and apparatus

BY HAUL SEINES

Species	Clarke		Island		Jefferson		King		Kitsap	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp	215,140	$6,454								
Cod							1,282	$45	3,285	$106
Flounders			461	$14			30	1	7,761	200
Herring			67	1			10,200	102	44,631	447
Perch							4,570	224	8,648	432
Salmon:										
Chum									44	1
Humpback									56	2
Skates							100	1	91	1
Smelt			56,031	4,482	1,625	$130	2,279	182	46,595	3,728
Sole							227	7	28,298	850
Octopus							73	1	109	2
Total	215,140	6,454	56,559	4,497	1,625	130	18,761	563	139,518	5,769

Species	Mason.		Pacific		Pierce		San Juan		Skagit	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod	72	$3								
Flounders	35	1			65	$5				
Herring							1,075	$11		
Perch	12,161	596			443	22			1,100	$138
Salmon:										
Blueback or sockeye			8,841	$1,149					54,299	5,998
Chinook			8,960	1,075					75,920	6,073
Humpback									2,692	97
Silver									4,385	180
Shad			6,582	66						
Skates	7	1								
Smelt	7,863	629			9,734	779			12,261	981
Sole	179	5								
Steelhead trout			4,830	318					968	77
Sturgeon			630	44						
Total	20,317	1,235	29,843	2,652	10,242	806	1,075	11	151,625	13,544

Species	Snohomish		Thurston		Whatcom		Other counties [1]		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp							160,020	$5,600	375,160	$12,054
Cod	135	$5							4,774	159
Dolly Varden trout	300	48							300	48
Flounders	5,041	145							13,393	366
Herring	5,980	60			27,897	$279			89,850	900
Perch	4,864	244	320	$16					32,106	1,672
Salmon:										
Blueback or sockeye							19,103	2,477	82,243	9,624
Chinook							2,040	244	86,920	7,392
Chum							185	2	229	3
Humpback									2,748	99
Silver							15,077	528	19,462	708
Sea bass, white, or squeteague	415	33							415	33
Shad									6,582	66
Skates									198	3
Smelt	14,223	1,778	4,808	385	4,000	500			159,419	13,574
Sole	717	22							29,421	884
Steelhead trout							11,464	802	17,262	1,197
Sturgeon							630	44	1,260	88
Octopus									182	3
Shrimp	1,030	124							1,030	124
Total	32,705	2,459	5,128	401	31,897	779	208,519	9,697	922,954	48,997

[1] Includes Garfield, Grant, Whitman, and Asotin Counties.

Yield of the shore fisheries of Washington in 1922, by counties, species, and apparatus—Continued

BY GILL NETS

Species	Clallam		Clarke		Cowlitz		Grays Harbor		King	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod									4,180	$145
Flounders									109	3
Perch									478	24
Salmon:										
Blueback or sockeye			74,384	$9,670	162,170	$19,565	1,350,000	$121,500	40,509	4,474
Chinook			138,581	16,630	166,407	19,968	281,510	14,053	12,880	1,050
Chum			7,935	80	25,145	253	427,500	4,068	34,956	827
Humpback									900	30
Silver	21,141	$782	7,949	278	50,739	1,774	415,952	12,479	120,069	1,570
Shad			8,060	81	10,692	111				
Smelt			15,450	155						
Steelhead trout	10,296	824	23,069	1,615	45,702	3,199	5,624	393		
Sturgeon			15,190	1,064	28,299	1,981	30,150	1,811		
Total	31,437	1,606	290,618	29,573	489,154	46,851	2,510,736	154,304	214,081	8,123

Species	Kitsap		Klickitat		Pacific		Pierce		Skagit	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod	122	$4					852	$30		
Flounders							948	28		
Perch	1,030	52					1,211	63		
Salmon:										
Blueback or sockeye	1,610	178	6,170	$802	9,079	$1,180	17,899	1,977	5,607	$619
Chinook			2,985	359	410,520	49,408	1,620	130	190,220	15,217
Chum	130	3	22	1	108,762	1,088	11,964	520	32,265	760
Humpback	158	6	5	1			606	22	168	6
Silver	409	29			36,046	1,258	20,610	781	107,991	4,116
Sea bass, white, or squeteague	41	3								
Shad					390	4				
Smelt							3,050	244		
Steelhead trout			2,087	147	2,646	184			2,796	309
Sturgeon			4,899	343	34,725	2,431				
Octopus	80	1					855	2		
Total	3,580	276	16,168	1,653	602,168	55,553	59,615	3,797	339,047	21,027

Species	Skamania		Snohomish		Wahkiakum		Whatcom		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod									5,154	$179
Flounders									1,057	31
Grayfish					4,366	$15			4,366	15
Perch									2,719	139
Salmon:										
Blueback or sockeye	9,625	$1,252	15,729	$1,738	53,410	6,952			1,746,192	169,907
Chinook	7,200	853	20,140	1,611	505,758	60,700			1,737,821	179,979
Chum	5,144	51	2,071	49	6,031	62			661,925	7,762
Humpback			186	7	170	6			2,193	78
Silver			16,218	618	18,630	655	1,021	$39	816,775	24,379
Sea bass, white, or squeteague									41	3
Shad	782	9			4,495	46			24,419	251
Smelt									18,500	399
Steelhead trout	1,352	92			38,862	2,718			132,434	9,481
Sturgeon	2,695	188			41,580	2,910			157,538	10,728
Octopus									935	3
Total	26,798	2,445	54,344	4,023	673,302	74,064	1,021	39	5,312,069	403,334

Yield of the shore fisheries of Washington in 1922, by counties, species, and apparatus—Continued

BY POUND NETS

Species	Cowlitz		Grays Harbor		King		Klickitat	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod					15,874	$556		
Flounders					5,968	119		
Halibut					191	17		
"Lingcod"					40	1		
Salmon:								
Blueback or sockeye	987	$128			440,762	48,692	7,936	$1,032
Chinook	141,600	16,992	318,520	$16,026	1,258,380	100,670	4,480	537
Chum	69,660	696	321,005	2,946	441,787	10,456	5,504	55
Humpback					16,752	605		
Silver	99,205	3,472	419,984	12,600	1,624,090	61,809	8,131	285
Sea bass, white, or squeteague					40	3		
Shad					218	22		
Skates					2,000	7		
Steelhead trout	20,839	1,868	32	2	26,593	1,861	14,590	1,021
Sturgeon	60	4	9,300	559	350	53	980	69
Octopus					3,193	11		
Total	332,351	23,160	1,068,841	32,133	3,836,238	224,882	41,621	2,999

Species	Pacific		San Juan		Skagit		Skamania	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:								
Blueback or sockeye	170,942	$22,223	76,342	$8,232	21,413	$2,267		
Chinook	591,204	70,945	172,540	13,803	337,480	26,999	10,280	$1,233
Chum	12,760	127	3,314	110	70,229	1,662		
Humpback			22,650	854	1,312	47		
Silver	346,434	12,126	159,810	6,157	602,501	22,530	1,428	50
Shad	7,827	79					4,368	305
Steelhead trout	186,741	13,072	424	34	3,688	296		
Sturgeon	45,709	3,250						
Octopus					81	1		
Total	1,361,617	121,822	435,080	29,190	1,036,704	53,802	16,076	1,588

Species	Wahkiakum		Whatcom		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod					15,874	$556
Flounders					5,968	119
Halibut					191	17
"Lingcod"					40	1
Salmon:						
Blueback or sockeye	3,566	$464	2,065,644	$226,648	2,787,592	309,686
Chinook	127,880	15,346	1,831,060	146,485	4,793,424	409,036
Chum	29,650	296	443,096	10,589	1,397,005	25,937
Humpback			75,431	2,714	116,145	4,220
Silver	144,840	5,069	1,387,309	52,798	4,793,732	176,896
Sea bass, white, or squeteague					40	3
Shad	432	4			12,845	410
Skates					2,000	7
Steelhead trout	53,771	3,763	12,684	1,015	319,362	22,932
Sturgeon	36,890	2,683			93,289	6,618
Octopus					3,274	12
Total	397,029	27,625	5,815,224	440,249	14,340,781	957,450

BY HOOP NETS AND POTS

Species	Clallam		Grays Harbor		Island		King		Kitsap	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crabs	39,247	$2,192	91,043	$5,008	18,230	$997	40,150	$2,208	80	$5

Species	Pacific		Skagit		Snohomish		Whatcom		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crabs	226,500	$12,459	230,460	$8,975	85,600	$4,709	120,460	$6,623	851,770	$43,176

Yield of the shore fisheries of Washington in 1922, by counties, species, and apparatus—Continued

BY LINES

Species	Clallam		Grays Harbor		Island		Jefferson	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod	3,370	$118			354	$12		
Halibut	72,676	7,132			23,000	2,261		
"Lingcod"	147	3						
Salmon:								
Chinook	1,051,035	83,931	30,580	$1,529	788,740	63,113	27,420	$2,192
Silver	920,361	34,841	60,234	1,807	648,161	23,601	25,726	954
Octopus	11,997	30						
Total	2,059,586	126,055	90,814	3,336	1,460,255	88,987	53,146	3,146

Species	King		Kitsap		Klickitat		Mason		Pacific	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod	111	$2	9,901	$345			130	$4		
Flounders	365	7	371	15						
Grayfish	1,500	4								
Halibut	30	4	32,000	3,146						
Perch	35	2	45	2						
Rockfishes							120	4		
Salmon:										
Chinook	194,130	15,529	53,680	4,295					71,200	$8,542
Silver	1,028,468	39,053	161,045	6,125					282,467	9,898
Skates			740	2			40	1		
Steelhead trout									848	60
Sturgeon					2,275	$159			140	10
Octopus			110	1						
Total	1,224,639	54,601	257,892	13,931	2,275	159	290	9	354,655	18,510

Species	Pierce		San Juan		Skagit		Skamania	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod	1,163	$41	5,844	$205	850	$30		
Grayfish	210	1						
Halibut	39,500	3,848	3,409	273	370	30		
"Lingcod"			773	15	1,848	37		
Rockfishes	2,110	106	8,496	408				
Salmon:								
Chinook	601,450	48,113	40	3				
Silver	490,620	18,143	28,230	1,075	4,184	159		
Sea bass, white, or squeteague			100	8				
Sturgeon							2,275	$159
Octopus	600	2	594	1	2,533	12		
Total	1,135,653	70,254	47,486	1,988	9,785	268	2,275	159

Species	Snohomish		Wahkaikum		Whatcom		Other counties [1]		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod									21,723	$757
Flounders									736	22
Grayfish									1,710	5
Halibut									170,985	16,694
"Lingcod"									2,768	55
Perch									80	4
Rockfishes									10,726	518
Salmon:										
Chinook	540	$43			117	$9			2,818,932	227,299
Silver	17,304	658							3,666,800	136,314
Sea bass, white, or squeteague									100	8
Skates									780	3
Steelhead trout									848	60
Sturgeon			700	$49			6,715	$470	12,105	847
Octopus									15,834	46
Total	17,844	701	700	49	117	9	6,715	470	6,724,127	382,632

[1] Includes Okanogan, Walla Walla, and Asotin Counties.

Yield of the shore fisheries of Washington in 1922, by counties, species, and apparatus—Continued

BY DRAG BAG NETS

Species	Cowlitz		Island		King		Kitsap	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod							168	$5
Flounders							81	3
Herring							19,700	197
Perch					4,685	$234	6,060	303
Salmon:								
Chinook	460	$54						
Silver	261	9						
Skates							15	1
Smelt	1,137,452	11,376	11,476	$918			16,141	1,291
Sole							64,321	1,932
Steelhead trout	56	4						
Total	1,138,229	11,443	11,476	918	4,685	234	106,486	3,732

Species	Mason		Skagit		Snohomish		Thurston	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Smelt	4,783	$383	13,068	$1,066	404	$52	22,225	$1,778

Species	Wahkiakum		Whatcom		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod					168	$5
Flounders					81	3
Herring					19,700	197
Perch					10,745	537
Salmon:						
Chinook					460	54
Silver					261	9
Skates					15	1
Smelt	1,100	$11	1,332	$118	1,207,981	16,993
Sole					64,321	1,932
Steelhead trout					56	4
Total	1,100	11	1,332	118	1,303,788	19,735

BY FISH WHEELS

Species	Pacific		Klickitat		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:						
Blueback or sockeye	40,334	$5,243			40,334	$5,243
Chinook	6,020	822			6,020	822
Silver			6,090	$213	6,090	213
Shad	4,193	42			4,193	42
Steelhead trout	1,491	104	4,000	280	5,491	384
Sturgeon	840	59			840	59
Total	52,878	6,270	10,090	493	62,968	6,763

BY BEAM TRAWLS

Species	Jefferson		King		Kitsap		Pierce		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Sole	460	$14	26,500	$795			9,350	$281	36,310	$1,090
Shrimp					18,484	$2,218	3,712	445	22,196	2,663
Total	460	14	26,500	795	18,484	2,218	13,062	726	58,506	3,753

Yield of the shore fisheries of Washington in 1922, by counties, species, and apparatus—Continued

BY REEF NETS

Species	San Juan		Species	San Juan	
	Pounds	*Value*		*Pounds*	*Value*
Salmon:			Salmon—Continued.		
Blueback or sockeye	4,767	$527	Humpback	47	$2
Chinook	160	13	Silver	25,360	965
Chum	2,300	54	Total	32,634	1,561

BY WEIRS

Species	Whatcom	
	Pounds	*Value*
Herring	74,000	$740

BY FORKS, TONGS, ETC.

Species	Clallam		Grays Harbor		Island		Jefferson	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Clams:								
Hard	68,230	$1,023			6,020	$91	246,015	$3,691
Razor			1,807,884	$71,296			79,877	2,996
Total	68,230	1,023	1,807,884	71,296	6,020	91	325,892	6,687

Species	King		Kitsap		Mason		Pacific		Pierce	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Clams:										
Hard	29,850	$896	312,516	$4,820					1,009	$15
Razor							748,590	$32,613		
Oysters:										
Native, market					76,286	$52,239	70,000	50,000		
Native, seed					18,487	1,432				
Total	29,850	896	312,516	4,820	94,773	53,671	818,590	82,613	1,009	15

Species	San Juan		Skagit		Thurston		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Clams:								
Hard	10,650	$319	1,000	$30	17,955	$539	693,245	$11,424
Razor							2,636,351	106,905
Oysters:								
Native, market					231,392	181,808	377,678	284,047
Native, seed					1,106	158	19,593	1,590
Eastern, market					45,710	24,416	45,710	24,416
Total	10,650	319	1,000	30	296,163	206,921	3,772,577	428,381

CANNING INDUSTRY

In 1920 there were 55 canneries in Washington, valued at $3,378,579, carrying cash capital of $354,600, employing 2,000 persons, and paying $809,997 in wages. Their total products were valued at $5,524,433. Salmon was by far the most important fish canned, the total production being 441,667 cases, valued at $4,823,174. Puget Sound was the most important district, producing $2,306,447 worth of products. The Columbia River was a close second, with a production amounting to $2,035,335, and the value of canned salmon on the Washington coast amounted to only $481,392. Next in importance to salmon was the production of canned razor clams, totaling

$640,875 in value. Following razor clams were hard clams, whole, minced, and juice, with a production valued at $55,447. Small amounts of shad, shad roe, sturgeon, and crabs were canned in Washington also.

The following table gives in detail the statistics concerning the canning industries in Washington in 1923, by districts:

Canning industry of Washington in 1922, by districts

Items	Puget Sound		Columbia River		Washington coast		Total	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Establishments	20	$2,116,979	9	$736,019	26	$525,582	55	$3,378,579
Cash capital		186,700		81,800		86,100		354,600
Persons engaged	1,041		342		617		2,000	
Wages paid		441,165		211,358		157,474		809,997
PRODUCTS								
Salmon:								
Chinook—	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
1-pound tall	1,998	$8,199	7,825	$71,253	1,481	$8,249	11,304	$87,701
1-pound flat	9,639	95,782	26,397	350,706			36,036	446,488
1-pound oval			2,998	56,961			2,998	56,961
½-pound flat	11,002	151,307	56,998	937,742	1,086	8,480	69,086	1,097,529
½-pound oval			300	7,440			300	7,440
Blueback or sockeye—								
1-pound tall	500	8,500	75	1,050			575	9,550
1-pound flat	12,688	226,204			752	12,032	13,440	238,236
½-pound flat	35,366	694,143	16,572	289,284	18,687	349,460	70.625	1,332,887
Silver—								
1-pound tall	38,019	233,129	2,771	14,436	4,914	24,289	45,704	271,854
1-pound flat	34,365	226,666	14,879	110,654			49,244	337,320
½-pound flat	39,940	380,919	7,437	80,246	1,174	9,329	48,551	470,494
Humpback or pink—								
1-pound tall	811	3,555			1,234	5,212	2,045	8,767
½-pound flat	1,506	9,779					1,506	9,779
Chum—								
1-pound tall	60,567	246,317	2,048	8,239	15,772	63,189	78,387	317,745
1-pound flat			76	532			76	532
½-pound flat	3,718	21,947	669	4,194	240	1,152	4,627	27,293
Steelhead—								
1-pound tall			87	1,183			87	1,183
1-pound flat			1,551	21,714			1,551	21,714
½-pound flat			5,525	79,701			5,525	79,701
Total	250,119	2,306,447	146,208	2,035,335	45,340	481,392	441,667	4,823,174
Shad: ½-pound flat			271	1,146			271	1,146
Shad roe: ½-pound flat			25	591			25	591
Sturgeon: ½-pound flat			10	200			10	200
Crabs: ½-pound flat	125	3,000					125	3,000
Clams, hard:								
Whole—								
No. 1 (4 dozen)	2,048	15,144			78	604	2,126	15,748
No. 2 (2 dozen)	4,144	20,614					4,144	20,614
No. 10 (½ dozen)	1,754	10,528					1,754	10,528
Minced—								
No. 1 (4 dozen)	970	5,909					970	5,909
½-pound flat (4 dozen)	358	1,792					358	1,792
Juice—								
No. 2 (2 dozen)	130	429					130	429
No. 10 (½ dozen)	61	427					61	427
Total	9,465	54,843			78	604	9,543	55,447
Clams, razor:								
Whole—								
No. 1 (4 dozen)			305	3,355	8,829	74,830	9,134	78,185
No. 2 (2 dozen)			294	1,911	1,100	7,150	1,394	9,061
No. 10 (½ dozen)					138	966	138	966
Minced—								
No. 1 (4 dozen)			175	1,313	33,502	237,309	33,677	238,622
No. 2 (2 dozen)			175	1,120	3,034	17,907	3,209	19,027
½-pound flat			250	1,500	50,849	289,922	51,099	291,422
Juice—								
No. 2 (2 dozen)					1,076	3,228	1,076	3,228
No. 10 (½ dozen)					52	364	52	364
Total			1,199	9,199	98,580	631,676	99,779	640,875
Grand total	259,709	2,364,290	147,713	2,046,471	143,998	1,113,672	551,420	5,524,433

WHOLESALE FISH TRADE

The most important wholesale fish dealers of the State are located at Seattle, where a large business is done in the shipping of fresh and frozen halibut, salmon, and a few other kinds of fish to eastern points in the United States. In a recent market survey it was shown that 63 per cent of the quantity of fish received at Seattle was reshipped by rail, largely to points east of the Rocky Mountains.

In 1922 there were 22 establishments, employing 248 persons, with an investment of $573,295 and paying wages amounting to $332,961, engaged in the wholesale fresh and frozen fish trade in the State of Washington. In addition to these there were 12 establishments primarily engaged in the fish canning or curing business, which also handled fresh fish.

Wholesale fish trade of Washington in 1922

Locality	County	Establishments	Persons engaged	Buildings	Accessory property	Cash capital	Wages
		Number	*Number*	*Value*	*Value*		
Seattle	King	14	161	$351,524	$48,355	$30,500	$246,551
Olympia	Thurston	3	51	31,411	17,606	11,000	55,494
Other localities		5	36	63,000	12,999	6,900	30,916
Total		22	248	445,935	78,960	48,400	332,961

NOTE.—In addition to the above, 12 firms, shown elsewhere as preparing various fishery products, also handled fresh fish.

FISHERIES OF OREGON

The fisheries of Oregon in 1922 employed 5,497 persons, 32 vessels, 1,718 power boats, and 501 rowboats and scows. The investment in vessels, boats, gear, and shore property amounted to $4,892,576, and the products of the fisheries amounted to 22,371,764 pounds, valued at $1,255,689.

The various species of salmon were by far the most important of Oregon's commercial fishes, yielding 18,093,228 pounds, valued at $999,367. Steelhead trout contributed 1,820,734 pounds, valued at $136,802; halibut, 239,095 pounds, valued at $20,567; sturgeon, 216,765 pounds, valued at $13,257; shad, 578,003 pounds, valued at $11,332; sablefish, smelts, "lingcod," rockfishes, sole, and other fishes, 303,294 pounds, valued at $5,571. The various kinds of shellfish yielded 1,120,645 pounds, valued at $68,793.

Clatsop County, situated at the mouth of the Columbia River, by reason of her important salmon fisheries, took first place among the counties of Oregon in the value of her fishery products, yielding 9,510,246 pounds, valued at $506,429. Salmon and steelhead trout constituted over 85 per cent of the catch. In the production of sturgeon Clatsop County was also foremost, her catch being 97,860 pounds, valued at $5,878. Shad yielded 284,894 pounds, valued at $2,910, and smelts 2,350 pounds, valued at $24. The shellfish yield in the county was 242,276 pounds, valued at $15,495. Clatsop County was the sole producer of razor clams in Oregon, the catch amounting to 163,110 pounds, valued at $7,290. This county ranks third in production of crabs, with a yield of 70,496 pounds, valued at $7,049. Crawfish made up the remainder of the shellfish catch.

Other counties along the Columbia River produced 5,070,410 pounds of fishery products, valued at $384,130. Practically all of this production consisted of salmon and steelhead trout, with a small quantity of sturgeon. Multnomah County, in which the city of Portland is located, was foremost in production. In addition to the salmons, steelhead trout, and sturgeon, which constituted the bulk of her fishery production, her fishermen caught halibut, "lingcod," rockfishes, sablefish, other fish, and shellfish.

The coastal counties, exclusive of Clatsop County, produced 7,558,783 pounds, valued at $348,356. As in the other sections of Oregon, the salmon and steelhead trout yielded the bulk of fishery products. Tillamook County showed the greatest production, followed in order by Lincoln, Douglas, Coos, Curry, and Lane Counties. Lincoln County produced the greatest variety of fishes, included in her catch being halibut, "lingcod," rockfishes, sablefish, smelt, and sole, as well as the predominant salmons. Her shell fisheries were also of some importance, yielding 241,942 pounds, valued at $19,298, and consisted of soft clams, oysters, crawfish, and crabs. In the production of the last named, Lincoln County was first in the State. The interior counties of Oregon produced 232,325 pounds, valued at $16,774, consisting largely of salmon and fresh-water crawfish.

The following table gives in detail the statistics of the fisheries of Oregon in 1922:

Persons engaged, investment, and products of the fisheries of Oregon in 1922, by counties

Items	Clackamas		Clatsop		Columbia		Coos	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels transporting			45		1			
In shore fisheries	21		2,356		301		121	
Shoresmen			947		54		43	
Total	21		3,348		356		164	
INVESTMENT								
Vessels, transporting, gasoline			26	$190,595	1	$3,500		
Tonnage			248		10			
Outfit				25,566		276		
Power boats	14	$5,150	969	496,200	208	66,150	55	$15,500
Rowboats and scows	2	50	103	51,465	28	1,260	28	1,475
Apparatus, shore fisheries:								
Haul seines			21	21,000	9	4,438	3	1,300
Length in yards			11,550		3,150		800	
Gill nets	15	2,625	1,235	360,905	235	45,752	140	16,200
Length in yards	3,500		473,300		60,740		12,040	
Pound nets			21	26,400	9	6,950		
Hoop nets			330	960			28	76
Wheels			1	3,500				
Dip nets			1	2	2	3		
Pots and traps	70	105	130	195	80	120	36	108
Lines		75		8,500				252
Tongs, hoes, etc			41	410			9	51
Shore and accessory property				2,017,981		75,600		32,200
Cash capital				79,600		4,500		6,700
Total		8,005		3,283,279		208,549		73,799

Persons engaged, investment, and products of the fisheries of Oregon in 1922, by counties—Continued

Items	Clackamas		Clatsop		Columbia		Coos	
PRODUCTS								
Salmon:	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Blueback or sockeye	6,360	$763	258,035	$30,994	159,674	$19,160		
Chinook	112,427	6,745	6,767,441	357,273	1,239,069	81,806	367,809	$28,954
Chum			35,977	379	25,030	250	300	3
Silver	30,758	923	1,131,665	45,255	42,366	1,310	342,327	6,925
Shad	1,787	64	284,894	2,910	145,331	3,614	17,474	647
Smelt			2,350	24				
Steelhead trout	11,166	605	689,748	48,221	161,098	9,725	103,434	10,343
Sturgeon	1,550	93	97,860	5,878	33,941	2,064	380	9
Clams:								
Razor			163,110	7,290				
Soft							28,966	2,897
Crabs			70,496	7,049			48,960	1,632
Crawfish	1,500	200	8,670	1,156	11,100	1,480	500	50
Total	165,548	9,393	9,510,246	506,429	1,817,609	119,409	910,150	51,460

Items	Curry		Douglas		Hood River		Josephine	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
In shore fisheries	148		189		7		26	
Shoresmen	34		22				6	
Total	182		211		7		32	
INVESTMENT								
Power boats	69	$10,350	92	$25,450	1	$200		
Rowboats and scows	9	250	34	1,895	5	200	13	$845
Apparatus, shore fisheries:								
Gill nets	85	31,644	177	27,910	14	240	13	1,560
Length in yards	21,395		25,145		480		1,040	
Pound nets					1	500		
Hoop nets			350	1,050				
Pots and traps			325	1,950				
Lines				415				
Shore and accessory property		106,050		77,265				22,000
Cash capital		5,000		8,800				2,000
Total		153,294		144,735		1,140		26,405
PRODUCTS								
Salmon:	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Blueback or sockeye			12	$2	5,844	$733		
Chinook	697,257	$34,863	291,184	23,044	27,432	3,092	44,019	$4,401
Chum			10,099	152	5,000	50		
Silver	686	21	942,551	23,334	1,105	38		
Shad			85,536	3,165				
Steelhead trout	6,044	603	86,694	9,536	1,760	123		
Sturgeon			2,551	127	1,155	81		
Crabs			296,340	9,836				
Total	703,987	35,487	1,714,967	69,196	42,296	4,117	44,019	4,401

Persons engaged, investment, and products of the fisheries of Oregon in 1922, by counties—Continued

Items	Lane		Lincoln		Multnomah		Tillamook	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing			4		16			
On vessels transporting					2			
In shore fisheries	78		166		252		275	
Shoresmen	9		41		165		41	
Total	87		211		435		316	
INVESTMENT								
Vessels, fishing, gasoline			1	$8,000	3	$10,000		
Tonnage			10		38			
Outfit				3,000		7,500		
Vessels, transporting, gasoline					1	2,000		
Tonnage					10			
Outfit						975		
Power boats	47	$7,050	39	7,200	121	40,550	99	$28,300
Rowboats and scows	3	130	115	3,515	47	2,350	103	2,415
Apparatus, vessel fisheries:								
Lines				450		900		
Apparatus, shore fisheries:								
Haul seines	1	500	1	250	7	7,600		
Length in yards	300		150		4,500			
Gill nets	109	15,060	213	15,054	133	29,667	474	40,900
Length in yards	10,390		20,545		14,355		56,160	
Pound nets					14	47,600		
Hoop nets	30	90	575	858	15	45	280	1,120
Wheels					18	46,700		
Dip nets					12	49		
Pots and traps	30	180	40	40	305	458	48	192
Lines		100		70		760		80
Tongs, hoes, etc	1	2	25	241			8	14
Shore and accessory property		10,500		41,441		366,700		100,456
Cash capital		800		7,500		21,700		15,400
Total		34,412		87,619		585,554		188,877
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Halibut			164,433	$13,155	74,662	$7,412		
"Lingcod"			17,536	351	3,662	162		
Rockfishes			146	3	2,124	85		
Sablefish			30,687	1,227	26,421	1,301		
Salmon:								
Blueback or sockeye			25	2	336,251	41,279		
Chinook	65,517	$3,299	499,292	21,442	1,049,642	83,753	1,035,005	$54,390
Chum	5,890	117	15,725	158	9,103	91	21,178	212
Silver	299,733	5,894	784,818	18,195	104,125	3,098	551,166	15,272
Shad	3,218	121	10	1	38,753	770	1,000	40
Smelt					215,000	2,150		
Sole			25	1				
Steelhead trout	35,721	4,280	97,722	7,607	240,658	14,049	155,071	15,503
Sturgeon	936	18	304	12	62,423	3,991	3,739	150
Other fish					5,343	267		
Clams:								
Soft	1,000	100	13,734	1,371			39,100	3,910
Oysters: Native, market—								
Private			50,001	5,000				
Public			24,997	2,500				
Crabs	12,960	432	152,460	10,327	3,806	200	145,780	7,023
Crawfish			750	100	24,857	3,314		
Total	424,975	14,261	1,852,665	81,452	2,196,830	161,922	1,952,039	96,500

Persons engaged, investment, and products of the fisheries of Oregon in 1922, by counties—Continued

Items	Wasco		Washington		Yamhill		Total	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing							20	
On vessels transporting							48	
In shore fisheries	53		3		3		3,999	
Shoresmen	68						1,430	
Total	121		3		3		5,497	
INVESTMENT								
Vessels, fishing, gasoline							4	$18,000
Tonnage							48	
Outfit								10,500
Vessels, transporting, gasoline							28	196,095
Tonnage							268	
Outfit								26,817
Power boats	1	$1,000	3	$375			1,718	703,475
Rowboats and scows	5	230	3	150	3	$75	501	66,305
Apparatus, vessel fisheries: Lines								1,350
Apparatus, shore fisheries:								
Haul seines	2	900					44	35,988
Length in yards	330						20,780	
Gill nets	1	40			3	247	2,847	587,804
Length in yards	100				330		699,520	
Pound nets							45	81,450
Hoop nets							1,608	4,199
Wheels	10	16,000					29	66,200
Dip nets	35	88					50	142
Pots and traps			450	675	20	30	1,534	4,053
Lines		15						10,240
Tongs, hoes, etc							84	682
Shore and accessory property		71,968		115				2,922,276
Cash capital		5,000						157,000
Total		95,241		1,315		352		4,892,576
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Halibut							239,095	$20,567
"Lingcod"							21,198	513
Rockfishes							2,270	88
Sablefish							57,108	2,528
Salmon:								
Blueback or sockeye	169,588	$22,047					935,789	114,980
Chinook	454,038	54,484					12,650,132	757,546
Chum	83	1					128,385	1,413
Silver	147,022	5,145			600	$18	4,378,922	125,428
Shad							578,003	11,332
Smelt							217,350	2,174
Sole							25	1
Steelhead trout	231,018	16,171			600	36	1,820,734	136,802
Sturgeon	11,926	834					216,765	13,257
Other fish							5,343	267
Clams:								
Razor							163,110	7,290
Soft							82,800	8,278
Oysters: Native, market—								
Private							50,001	5,000
Public							24,997	2,500
Crabs							730,802	36,499
Crawfish			20,808	$2,776	750	150	68,935	9,226
Total	1,013,675	98,682	20,808	2,776	1,950	204	22,371,764	1,255,689

VESSEL FISHERIES

In the vessel fishery of Oregon in 1922 only four vessels were actually engaged in fishing. Their catch, made up entirely of ocean fish caught by lines, amounted to 325,039 pounds, valued at $23,964, of which 239,095 pounds, valued at $20,567, were halibut. The remainder of the catch was made up of sablefish, "lingcod," and other fishes incidentally caught in the halibut fishery.

The following table gives the detailed statistics of the vessel fishery of Oregon in 1922.

Yield of the vessel fisheries of Oregon in 1922, by counties, species, and apparatus

Apparatus and species	Lincoln		Multnomah		Total	
Lines:	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Halibut	164,433	$13,155	74,662	$7,412	239,095	$20,567
"Lingcod"	17,536	351	3,662	162	21,198	513
Rockfishes	146	3	2,124	85	2,270	88
Sablefish	30,687	1,227	26,421	1,301	57,108	2,528
Soles	25	1			25	1
Other fish			5,343	267	5,343	267
Total	212,827	14,737	112,212	9,227	325,039	23,964

SHORE AND BOAT FISHERIES

The shore and boat fisheries of Oregon in 1922 greatly exceeded the vessel fishery in importance, employing 1,718 power boats under five tons net and 501 rowboats and sailboats, manned by 3,999 fishermen and yielding 22,046,725 pounds, valued at $1,231,725.

Gill nets yielded 14,437,131 pounds, valued at $612,561, which was over half of the State's entire production. Haul seines produced 3,912,443 pounds, valued at $360,673; fish wheels, 1,242,303 pounds, valued at $125,592; pound nets, 471,335 pounds, valued at $31,416; and lines, 529,514 pounds, valued at $24,426. All of this gear was used principally in the salmon fisheries, and although a limited amount of sturgeon and shad also were caught the great bulk of the catch was in all cases salmon and steelhead trout. A small catch of silver salmon, steelhead trout, and smelts was made by dip nets, the entire amount being 333,354 pounds, valued at $8,264.

Crabs and crawfish were taken by hoop nets, traps, and pots, the entire catch amounting to 799,737 pounds, valued at $45,725; clams and oysters were taken by means of tongs, forks, etc., the entire catch amounting to 320,908 pounds, valued at $23,068.

The following tables show, by gear, the yield of the shore and boat fisheries of Oregon in 1922.

Yield in the shore fisheries of Oregon in 1922, by counties, species, and apparatus

BY HAUL SEINES

Species	Clatsop		Columbia		Coos		Lane	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:								
Blueback or sockeye	145,708	$17,538	26,105	$3,132				
Chinook	1,890,832	226,900	109,007	12,126	212,470	$16,997	1,523	$76
Silver	165,891	6,636	82	3	51,180	1,023	5,947	119
Shad	254,378	2,544	57,202	572				
Steelhead trout	500,351	35,023	54,149	3,778				
Sturgeon	4,784	287	3,267	227			936	18
Total	2,961,944	288,928	249,812	19,838	263,650	18,020	8,406	213

Species	Lincoln		Multnomah		Wasco		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:								
Blueback or sockeye			149	$19	12,520	$1,628	184,482	$22,317
Chinook			105,735	8,540	104,520	12,542	2,424,087	277,181
Silver	2,000	$60	22,490	718	57,560	2,014	305,150	10,573
Shad							311,580	3,116
Steelhead trout	500	25	55,964	3,425	66,892	4,682	677,856	46,933
Sturgeon			301	21			9,288	553
Total	2,500	85	184,639	12,723	241,492	20,866	3,912,443	360,673

BY GILL NETS

Species	Clackamas		Clatsop		Columbia		Coos		Curry	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:										
Blueback or sockeye	6,360	$763	98,410	$11,786	130,899	$15,707				
Chinook	112,427	6,745	4,720,262	111,611	1,119,863	68,815	153,413	$11,803	697,257	$34,863
Chum			31,249	332	22,325	223	300	3		
Silver	26,105	783	508,399	20,333	36,556	1,092	279,262	5,664	686	21
Shad	1,787	64	19,652	256	88,129	3,042	17,474	647		
Steelhead trout	11,166	605	124,054	8,625	98,307	5,431	103,434	10,343	6,044	603
Sturgeon	1,550	93	90,326	5,426	30,435	1,826	380	9		
Total	159,395	9,053	5,592,352	158,369	1,526,564	96,136	554,263	28,469	703,987	35,487

Species	Douglas		Hood River		Josephine		Lane		Lincoln	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:										
Blueback or sockeye	12	$2	4,264	$554					25	$2
Chinook	288,434	22,824	19,450	2,334	44,019	$4,401	63,994	$3,223	499,292	21,442
Chum	10,099	152	5,000	50			5,890	117	15,725	158
Silver	931,190	23,279	1,105	38			257,759	5,055	781,804	18,105
Shad	85,536	3,165					3,218	121	10	1
Steelhead trout	86,694	9,536	876	61			35,721	4,280	97,222	7,582
Sturgeon	2,481	125	865	61					304	12
Total	1,404,446	59,083	31,560	3,098	44,019	4,401	366,582	12,796	1,394,382	47,302

Species	Multnomah		Tillamook		Wasco		Yamhill		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:										
Blueback or sockeye	112,172	$13,865			2,647	$344			354,789	$43,023
Chinook	631,967	50,696	1,034,921	$54,385	2,830	339			9,388,129	393,481
Chum	1,728	18	21,178	212					113,494	1,265
Silver	11,761	284	550,476	15,255			600	$18	3,385,703	89,927
Shad	19,510	478	1,000	40					236,316	7,814
Steelhead trout	64,914	3,979	153,714	15,367	109	8	600	36	782,855	66,456
Sturgeon	45,715	2,893	3,739	150					175,845	10,595
Total	887,767	72,213	1,765,028	85,409	5,586	691	1,200	54	14,437,131	612,561

Yield in the shore fisheries of Oregon in 1922, by counties, species, and apparatus—Continued

BY POUND NETS

Species	Clatsop		Columbia		Hood River		Multnomah		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:										
Blueback or sockeye	1,608	$193	2,670	$321	1,580	$179	12,624	$1,515	18,482	$2,208
Chinook	93,929	11,272	10,199	865	7,982	758	61,943	3,717	174,053	16,612
Chum	4,728	47	2,705	27			4,088	40	11,521	114
Silver	99,728	3,982	5,728	215			37,938	1,138	143,394	5,335
Shad	8,487	86					3,303	83	11,790	169
Steelhead trout	61,953	4,336	8,642	516	884	62	37,422	1,871	108,901	6,785
Sturgeon	1,508	90	189	11	290	20	1,207	72	3,194	193
Total	271,941	20,006	30,133	1,955	10,736	1,019	158,525	8,436	471,335	31,416

BY WHEELS

Species	Clatsop		Multnomah		Wasco		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:								
Blueback or sockeye	12,309	$1,477	211,306	$25,880	154,421	$20,075	378,036	$47,432
Chinook	9,426	1,131	247,396	20,641	346,688	41,603	603,510	63,375
Chum			3,287	33			3,287	33
Silver			3,112	93	30,880	1,081	33,992	1,174
Shad	2,377	24	15,940	209			18,317	233
Steelhead trout	3,271	229	82,358	4,774	105,889	7,412	191,518	12,415
Sturgeon	1,242	75	8,009	548	4,392	307	13,643	930
Total	28,625	2,936	571,408	52,178	642,270	70,478	1,242,303	125,592

BY DIP NETS

Species	Clatsop		Multnomah		Wasco		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon: Silver					58,004	$2,030	58,004	$2,030
Smelt	2,350	$24	215,000	$2,150			217,350	2,174
Steelhead trout					58,000	4,060	58,000	4,060
Total	2,350	24	215,000	2,150	116,004	6,090	333,354	8,264

BY LINES

Species	Clackamas		Clatsop		Coos		Douglas		Lane	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:										
Chinook			52,992	$6,359	1,926	$154	2,750	$220		
Chum										
Silver	4,653	$140	357,647	14,304	11,885	238	11,361	55	36,027	$720
Steelhead trout			119	8						
Sturgeon							70	2		
Total	4,653	140	410,758	20,671	13,811	392	14,181	277	36,027	720

Species	Lincoln		Multnomah		Tillamook		Wasco		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:										
Chinook			2,601	$159	84	$5			60,353	$6,897
Chum							83	$1	83	1
Silver	1,014	$30	28,824	865	690	17	578	20	452,679	16,389
Steelhead trout					1,357	136	128	9	1,604	153
Sturgeon			7,191	457			7,534	527	14,795	986
Total	1,014	30	38,616	1,481	2,131	158	8,323	557	529,514	24,426

Yield in the shore fisheries of Oregon in 1922, by counties, species, and apparatus—Continued

BY HOOP NETS, TRAPS, AND POTS

Species	Clackamas		Clatsop		Columbia		Coos	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crabs			70,496	$7,049			48,960	$1,632
Crawfish	1,500	$200	8,670	1,156	11,100	$1,480	500	50
Total	1,500	200	79,166	8,205	11,100	1,480	49,460	1,682

Species	Douglas		Lane		Lincoln		Multnomah	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crabs	296,340	$9,836	12,960	$432	152,460	$10,327	3,806	$200
Crawfish					750	100	24,857	3,314
Total	296,340	9,836	12,960	432	153,210	10,427	28,663	3,514

Species	Tillamook		Washington		Yamhill		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crabs	145,780	$7,023					730,802	$36,499
Crawfish			20,808	$2,776	750	$150	68,935	9,226
Total	145,780	7,023	20,808	2,776	750	150	799,737	45,725

BY TONGS, FORKS, ETC.

Species	Clatsop		Coos		Lane		Lincoln		Tillamook		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Clams:												
Razor	163,110	$7,290									163,110	$7,290
Soft			28,966	$2,897	1,000	$100	13,734	$1,371	39,100	$3,910	82,800	8,278
Oysters, native, market:												
Private							50,001	5,000			50,001	5,000
Public							24,997	2,500			24,997	2,500
Total	163,110	7,290	28,966	2,897	1,000	100	88,732	8,871	39,100	3,910	320,908	23,068

CANNING INDUSTRY

In 1922 there were 29 canneries in Oregon valued at $1,563,337, with cash capital of $109,900, employing 897 persons and paying $569,994 in wages. Canned products produced were valued at $3,761,015, consisting largely of salmon, amounting to $3,696,680 in value, most of which was produced in the Columbia River district. A limited amount of canned shad and shad roe was also produced in the Columbia River district, while the pack of razor clams, valued at $54,074, was produced on the coast.

The following table gives in detail the statistics of the canning industry in Oregon in 1922, by districts:

Canning industry of Oregon in 1922, by districts

Items	Columbia River		Oregon coast		Total	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*
Establishments	16	$1,100,396	13	$462,941	29	$1,563,337
Cash capital		70,400		39,500		109,900
Persons engaged	674		223		897	
Wages paid		432,229		137,765		569,994
PRODUCTS						
Salmon:						
Blueback or sockeye—	*Cases*	*Value*	*Cases*	*Value*	*Cases*	*Value*
1-pound tall	315	$4,473			315	$4,473
½-pound flat	12,972	231,755			12,972	231,755
Chinook—						
2-pound tall	74	740			74	740
1-pound tall	5,987	43,895	51	$413	6,038	44,308
1-pound flat	46,256	581,709	8,693	91,826	54,949	673,535
1-pound oval	3,138	59,953	16,414	147,726	19,552	207,679
½-pound flat	91,794	1,538,872	13,699	234,180	105,493	1,773,052
½-pound oval	76	1,885			76	1,885
Chum—						
1-pound tall	1,609	6,475	2,248	9,442	3,857	15,917
1-pound flat			243	850	243	850
½-pound flat	636	3,816	279	1,339	915	5,155
Silver or coho—						
1-pound tall	8,103	46,806	2,608	14,665	10,711	61,471
1-pound flat	22,263	160,347	8,199	45,906	30,462	206,253
½-pound flat	18,956	161,045	9,006	84,166	27,962	245,211
Steelhead—						
1-pound tall	15	156			15	156
1-pound flat	6,675	61,783			6,675	61,783
½-pound flat	11,944	162,457			11,944	162,457
Total	230,813	3,066,167	61,440	630,513	292,253	3,696,680
Shad:						
1-pound tall	1,064	3,661			1,064	3,661
½-pound flat	118	474			118	474
½-pound oval	87	3,480			87	3,480
Total	1,269	7,615			1,269	7,615
Shad roe:						
1-pound oval	150	2,472			150	2,472
½-pound flat	6	174			6	174
Total	156	2,646			156	2,646
Razor clams, whole:						
No. 1 (4 dozen)			500	5,500	500	5,500
No. 2 (2 dozen)			300	1,950	300	1,950
½-pound flat (4 dozen)			1,907	11,349	1,907	11,349
Razor clams, minced:						
No. 1 (4 dozen)			3,971	29,576	3,971	29,576
No. 2 (2 dozen)			909	5,699	909	5,699
Total			7,587	54,074	7,587	54,074
Grand total	232,238	3,076,428	69,027	684,587	301,265	3,761,015

NOTE.—All products except clams have been converted to the equivalent of forty-eight 1-pound cans to the case.

WHOLESALE FISH TRADE

The wholesale fish trade of Oregon was conducted by 28 firms, 7 of them located in Portland and the remainder in the various smaller towns of the State. These firms had a total investment amounting to $267,685, in addition to $37,300 cash capital; they employed 127 persons and paid $82,393 in wages.

The following table gives the statistics of the wholesale trade of Oregon in 1922:

Investment, persons engaged, and wages paid in the wholesale fish trade of Oregon in 1922

Localities	Establishments		Cash capital	Persons engaged	Wages paid
	Number	*Value*		*Number*	
Portland	7	$64,600	$7,700	36	$20,926
Other localities throughout the State	21	203,085	29,600	91	61,467
Total	28	267,685	37,300	127	82,393

FISHERIES OF CALIFORNIA

In 1922, California was the leading fish-producing State on the Pacific coast. There were 9,173 persons engaged in fishing and related industries; 209 vessels engaged in fishing; 53 vessels engaged in transporting fish; 1,297 power boats and 292 rowboats and sailboats engaged in fishing; an investment of $13,047,414 in vessels, boats, fishing apparatus, shore property, and canneries; and a production of 191,126,852 pounds of fishery products, with a value to the fisherman of $6,773,981. Of this production 175,779,868 pounds, valued at $5,884,156, were fish; 5,310,609 pounds, valued at $456,970, were shellfish; and the remaining 10,036,375 pounds were whale products, valued at $432,855.

Of the fishes pilchards or sardines, furnishing the raw material for a valuable canning industry, were most important, producing 92,114,542 pounds, valued at $1,381,008. Albacore and tuna, equally important as raw material for canning, produced 25,252,392 pounds, valued at $1,269,417. The production of salmon amounted to 7,236,580 pounds, valued at $590,509, consisting mostly of chinooks but including a few silver salmon. A portion of the salmon was canned, though considerable quantities entered the fresh-fish trade. Bonito and skipjack yielded 11,648,413 pounds, valued at $578,150, most of which was also canned. Flounders followed in importance, the production being 4,742,819 pounds, valued at $470,813. Included in this item is the flounder known to trade as "California halibut," of which there were reported 3,068,913 pounds, valued at $419,867. Barracuda yielded 6,284,065 pounds, valued at $439,817; sole, 6,949,557 pounds, valued at $211,800; rockfishes, 4,219,650 pounds, valued at $205,239; and white sea bass, or squeteague, 2,904,054 pounds, valued at $176,993. The yield of cod, caught by California vessels fishing in Alaska waters and landing their salted product in San Francisco, amounted to 1,680,000 pounds, valued at $84,000.

Mackerel, yellowtail, striped bass, shad, smelts, "lingcod," rock bass, mullet, anchovies, and kingfish, named in order of the value of their yield, each produced less than $76,000 and over $10,000 worth of products. Some 20 other kinds of fish, each having a yield

valued at less than $10,000 and aggregating 2,056,318 pounds, valued at $70,746, made up the remainder of the fish production.

The production of shellfish amounted altogether to 5,310,609 pounds, valued at $456,970, most important of which, from the standpoint of value, were oysters, which yielded 94,598 pounds, valued at $101,351. Shrimps, spiny lobsters, crabs, abalones, clams, squid, octopus, mussels, and turtles, named in order of their value, made up the remainder of the yield of shellfish.

In addition to fish and shellfish, there were whale products to the value of $432,855, consisting of whale oil, 915,000 gallons, valued at $366,000; sperm oil, 5,050 gallons, valued at $2,525; and other products, 3,136,000 pounds, valued at $64,330.

Los Angeles, San Francisco, Monterey, and San Diego were the important centers of fishing. Los Angeles County, with its tuna and sardine fisheries, produced 86,803,137 pounds, valued at $2,771,177. San Francisco County, with an important market fishery, followed Los Angeles with a production of 24,939,899 pounds, valued at $1,101,288. Next in importance was Monterey County, with her large sardine fisheries, producing 49,351,971 pounds, valued at $1,087,858. San Diego County, with tuna and sardine fisheries similar to those of Los Angeles but of lesser magnitude, produced 18,241,117 pounds, valued at $852,620. The remaining counties, none of them with remarkably large catches, yielded 11,800,728 pounds, valued at $961,038.

The following table shows in detail the statistics of the fisheries of California in 1922:

Persons engaged, investment, and products of the fisheries of California in 1922, by counties

Items	Alameda		Colusa		Contra Costa		Del Norte	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels transporting					3			
In shore fisheries	26		9		187		143	
Shoresmen	31		14		63		119	
Total	57		23		253		262	
INVESTMENT								
Vessels, transporting					1	$5,050		
Tonnage					15			
Outfit						500		
Power boats	10	$15,000	1	$100	81	70,275	2	$550
Rowboats, scows, etc	2	80	10	796	15	1,400	90	2,060
Apparatus, shore fisheries:								
Gill nets	21	1,400	2	40	155	45,570	100	10,135
Length, in yards	2,800		170		81,690		19,090	
Lines		210				300		75
Haul seines	1	30	8	1,000			2	350
Length, in yards	80		895				660	
Tongs, forks, rakes, and hoes	27	52			19	38		
Fyke nets			15	90				
Miscellaneous apparatus							43	430
Shore and accessory property		45,950		200		246,829		35,500
Cash capital		30,700				42,000		10,000
Total		93,422		2,226		411,962		59,100

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	Alameda		Colusa		Contra Costa		Del Norte	
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp, German					35,456	$1,063		
Catfish					243	9		
Flounders	1,500	$45			2,409	72	707	$64
Grayfish	1,160	23						
Herring	70,345	1,407						
Kingfish	25	1						
"Lingcod"							3,645	182
Perch	31	1			30	1	1,402	56
Pike, Sacramento					4,249	127		
Rockfishes							9,132	457
Salmon:								
Chinook	7,000	630	12,664	$2,026	792,795	71,351	1,085,820	76,008
Silver							19,288	1,350
Sea bass, white, or squeteague							133	11
Shad	50	3			799,985	40,744		
Smelt	14,783	1,182					2,447	147
Splittail	196	5			1,018	30		
Steelhead trout							2,490	174
Striped bass	13,454	1,883	166	26	331,792	11,504		
Other fish	109	3			978	30		
Crabs	1,804	250					15,862	721
Shrimp	44,124	4,412						
Clams, soft	14,575	874			184,737	9,236		
Mussels	2,724	109						
Octopus							83	4
Turtles			75	8				
Total	171,880	10,828	12,905	2,060	2,153,692	134,167	1,141,009	79,174

Items	Glenn		Humboldt		Imperial		Los Angeles	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels, fishing							869	
On vessels, transporting							114	
In shore fisheries	10		50		7		776	
Shoresmen	24		85		7		2,182	
Total	34		135		14		3,941	
INVESTMENT								
Vessels, fishing, gasoline							135	$789,345
Tonnage							1,910	
Outfit								196,250
Vessels, transporting							35	333,500
Tonnage							1,358	
Outfit								11,550
Power boats			29	$27,950	1	$400	223	463,875
Rowboats, scows, etc	10	$310			2	300	13	620
Apparatus, vessel, fisheries:								
Purse seines							52	118,100
Length, in yards							26,680	
Gill nets							151	5,390
Length, in yards							10,980	
Lampara nets							107	79,310
Paranzella nets							1	43
Lines								1,675
Trammel nets							82	3,060
Length, in yards							7,200	
Pots							200	500
Apparatus, shore fisheries:								
Gill nets					3	150	306	8,140
Length, in yards					100		15,850	
Lines				1,605				4,155
Lampara nets							158	66,900
Haul seines	10	800	3	600				
Length, in yards	2,190		760					
Trammel nets							369	11,200
Length, in yards							25,500	
Tongs, forks, rakes, and hoes			5	10			23	37
Dip nets			12	24				
Pots							760	2,270
Miscellaneous apparatus			222	444				
Shore and accessory property		12,300		193,547		100		4,072,967
Cash capital		1,000		42,000				371,914
Total		14,410		266,180		950		6,540,751

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	Glenn		Humboldt		Imperial		Los Angeles	
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna							20,359,472	$1,029,573
Anchovies							364,797	7,295
Barracuda							4,951,931	345,001
Bonito and skipjack							7,203,308	360,022
Flounders			63,652	$5,075			1,677,898	233,021
Flying fish							8,495	174
Grayfish							4,475	90
Halfmoon							27,791	832
Herring			6,222	124				
Kingfish							252,659	5,053
"Lingcod"			12,060	603			172	8
Mackerel							1,708,881	51,259
Mullet					106,500	$11,715	13,328	1,458
Perch			67,077	2,683			59,962	3,006
Pike, Sacramento	153	$8						
Pilchard, or sardines							44,558,068	456,951
Pompano							14,108	4,315
Rock bass							146,673	8,758
Rockfishes			10,010	500			1,004,589	60,245
Salmon:								
Chinook	52,129	8,340	875,246	70,020				
Silver			36,468	2,917				
Sculpin							38,156	766
Sea bass, black, or jewfish							73,375	3,948
Sea bass, white, or squeteague							2,243,287	133,693
Sheepshead							1,373	14
Skates							3,938	79
Smelt			26,510	1,590			169,121	11,900
Sole			166	10			115,884	5,793
Striped bass	104	16						
Swordfish							22,563	469
Tomcod							90	4
Whitebait			20,874	1,252				
Whitefish							28,444	1,421
Yellowtail							1,521,641	30,420
Other fish			2,768	138			37,576	1,132
Crabs			115,236	5,238				
Spiny lobster							158,500	12,874
Clams, hard			20,242	1,013			2,290	160
Clams, soft			2,516	125				
Cockles							162	16
Octopus							5,981	235
Squid							22,772	1,136
Turtles							1,377	56
Total	52,386	8,364	1,259,047	91,288	106,500	11,715	86,803,137	2,771,177

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	Marin		Mendocino		Monterey		Orange	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels, fishing					21			
In shore, fisheries	137		102		465		46	
Shoresmen	22		31		837		3	
Total	159		133		1,323		49	
INVESTMENT								
Vessels, fishing, gasoline					3	$26,080		
Tonnage					18			
Outfit						7,500		
Power boats	44	$41,425	85	$90,700	270	417,500	17	$17,325
Rowboats, scows, etc	8	865			2	75	10	400
Apparatus, vessel fisheries:								
Abalone outfit					3	2,800		
Apparatus, shore fisheries:								
Gill nets	33	2,005	3	1,500	11	650	58	3,825
Length, in yards	3,730		2,000		1,360		7,650	
Lines		855		3,910		9,180		665
Lampara nets					32	37,500	1	450
Haul seines	4	400			2	350	3	700
Length, in yards	880				390		300	
Trammel nets					4	176	119	3,570
Length, in yards					320		6,000	
Tongs, forks, rakes, and hoes	98	165						
Bag nets	14	700						
Pots							165	445
Abalone outfit					1	800		
Miscellaneous apparatus	262	375			37	50		
Shore and accessory property		8,900		67,650		1,086,902		1,100
Cash capital		7,900		6,000		183,500		
Total		63,590		169,760		1,773,063		28,480
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna					236	$11	18,082	$1,085
Anchovies					136,433	2,728		
Barracuda					13,031	912	9,433	659
Bonito and skipjack					2,106	105	60	4
Flounders	1,927	$248	37,148	$3,714	26,550	1,894	88,331	12,335
Herring	12,650	253						
Kingfish					228,019	4,560	106	2
"Lingcod"	86	5	6,873	344	85,526	5,132		
Mackerel					537,137	16,115	31,633	948
Perch	30,623	919			20,741	622	1,158	58
Pilchards or sardines	125	3			44,676,589	893,531	1,360	14
Pompano					448	134		
Rock bass							6,486	392
Rockfishes	183	14	1,485	74	1,261,424	47,143	15,990	960
Sablefish					3,879	116		
Salmon:								
Chinook	230,108	23,010	1,456,090	101,926	463,461	37,077		
Silver			60,670	4,247	19,310	1,544		
Sculpin							20	1
Sea bass, black, or jewfish							287	18
Sea bass, white, or squeteague	19,191	1,337			45,732	1,846	29,875	1,809
Skates					908	18	719	15
Smelt	19,916	1,183			63,329	5,066	134,942	9,445
Sole					62,745	1,882	3,170	160
Striped bass	3,417	512						
Whitebait	* 132	16						
Yellowtail							1,261	25
Other fish					8,475	254	1,756	81
Crabs	27,500	3,750			44	3		
Spiny lobsters							17,504	2,107
Shrimp	126,950	12,695						
Abalone					1,504,943	60,197		
Clams, hard	10,200	1,020						
Clams, soft	80,890	8,956						
Mussels							897	89
Oysters, eastern, market	94,598	101,351						
Octopus	50	2			66,802	2,004		
Squid					124,103	4,964		
Total	658,546	155,274	1,562,266	110,305	49,351,971	1,087,858	363,070	30,207

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	Sacramento		San Diego		San Francisco		San Joaquin	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing			249		192			
On vessels transporting			12		57			
In shore fisheries	100		377		417		14	
Shoresmen	11		811		209		7	
Total	111		1,449		875		21	
INVESTMENT								
Vessels, fishing, steam					7	$238,800		
Tonnage					319			
Outfit						38,130		
Vessels, fishing, gasoline			54	$231,965	7	95,500		
Tonnage			513		84			
Outfit				68,100		21,350		
Vessels, fishing, sail					3	59,250		
Tonnage					1,043			
Outfit						16,000		
Vessels transporting			3	39,120	12	235,000		
Tonnage			138		1,385			
Outfit				6,000		25,963		
Power boats	47	$16,900	118	208,450	229	182,250	7	$2,735
Rowboats, scows, etc	20	4,640	13	630			21	4,025
Apparatus, vessel fisheries:								
Purse seines			2	1,900				
Length, in yards			1,000					
Gill nets			232	6,450				
Length, in yards			13,026					
Lampara nets			51	17,225				
Paranzella nets					28	7,250		
Lines				1,437		187		
Trammel nets			411	14,500				
Length in yards			33,288					
Shrimp nets					30	700		
Pots			530	1,400				
Harpoons					4	26,800		
Apparatus, shore fisheries:								
Gill nets	81	19,450	810	19,375	372	10,000	14	2,700
Length, in yards	24,150		37,950		20,790		4,880	
Lines				5,070		7,590		
Lampara nets			52	15,900	4	2,000		
Haul seines	1	250	2	500				
Length, in yards	300		500					
Trammel nets			882	27,030				
Length, in yards			57,170					
Tongs, forks, rakes, and hoes					30	75		
Fyke nets	30	180					50	300
Bag nets					60	1,500		
Pots			1,824	4,600				
Miscellaneous apparatus					2,509	5,046		
Shore and accessory property		21,500		1,074,094		347,030		30,500
Cash capital		7,500		104,110		113,000		3,500
Total		70,420		1,847,856		1,433,421		43,760
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna			4,872,537	$238,598				
Anchovies			500	10	150,786	$3,016		
Barracuda			1,204,980	83,833	81	8		
Bonito and skipjack			4,406,500	216,079				
Carp, German	11,158	$334					3,102	$93
Catfish	7,118	996						
Cod, salted					1,680,000	84,000		
Flounders			730,100	102,717	1,633,512	52,718		
Grayfish			214,900	4,723	93,641	1,873		
Hake					68,213	1,365		
Hardhead	18,206	1,183						
Herring					250,887	5,018		
Kingfish			13,735	275	3,434	69		
"Lingcod"			1,130	50	420,358	25,220		
Mackerel			183,040	5,506				
Mullet			28,800	3,168				
Perch			2,200	111	46,244	1,387		
Pike, Sacramento	1,466	50			487	15	1,015	30
Pilchard or sardines			2,705,800	27,058	170,420	3,409		
Pompano			220	88	1,685	502		
Rock bass			131,150	7,229				

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	Sacramento		San Diego		San Francisco		San Joaquin	
PRODUCTS—Continued	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Rockfishes			555,832	$33,348	747,137	$35,700		
Sablefish					212,008	6,361		
Salmon: Chinook	157,921	$18,950			722,890	65,060	238,637	$21,477
Sculpin			6,000	122				
Sea bass, black, or jewfish			13,545	481				
Sea bass, white, or squeteague			439,640	27,130	31,350	2,820		
Shad	47,438	1,664			31,633	950	84,667	3,269
Sheepshead			16,520	169				
Skates					110,588	2,213		
Smelt			27,230	1,574	85,408	6,832		
Sole			8,810	436	6,509,970	195,298		
Split-tail	7,587	227					1,607	48
Striped bass	8,317	1,247			166,761	25,014	83,895	12,584
Suckers	1,348	27						
Swordfish			1,800	37				
Tomcod					30,989	1,240		
Whitebait					63,001	7,560		
Whitefish			3,350	168				
Yellowtail			1,873,300	37,818				
Other fish			11,020	331	98,092	3,923		
Crabs					669,000	55,749		
Spiny lobster			726,278	58,451				
Shrimp					819,275	77,427		
Abalone			200	10				
Clams, hard					22	1		
Clams, soft					54,834	2,742		
Mussels					9,256	370		
Octopus					11,562	573		
Squid			62,000	3,100				
Sperm oil					37,875	2,525		
Whale oil					6,862,500	366,000		
Other whale products					3,136,000	64,330		
Total	260,559	24,678	18,241,117	852,620	24,929,899	1,101,288	412,923	37,501

Items	San Luis Obispo		Santa Barbara		Santa Cruz		Solano	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels transporting							3	
In shore fisheries	32		43		17		128	
Shoresmen	32		14		11		4	
Total	64		57		28		135	
INVESTMENT								
Vessels transporting							2	$2,000
Tonnage							10	
Outfit								1,250
Power boats	8	$9,875	10	$22,800	8	$3,760	82	51,830
Rowboats, scows, etc	4	100	6	120			56	12,300
Apparatus, shore fisheries:								
Gill nets	30	1,100	321	5,000	3	240	94	26,685
Length, in yards	2,100		9,530		480		44,150	
Lines		600		300		175		60
Lampara nets	2	400			8	3,400		
Haul seines			2	500	2	250	1	300
Length, in yards			250		200		500	
Trammel nets	4	150	27	1,080				
Length, in yards	160		1,080					
Tongs, forks, rakes, and hoes	50	75			10	20		
Pots			1,000	3,000				
Abalone outfit	1	1,000						
Miscellaneous apparatus					4	10		
Shore and accessory property		15,500		19,500		9,000		
Cash capital		6,000		3,500		2,500		
Total		34,800		55,800		19,355		94,425

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	San Luis Obispo		Santa Barbara		Santa Cruz		Solano	
PRODUCTS	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna			2,065	$150				
Barracuda	4,200	$378	95,192	8,567	517	$36		
Bonito and skipjack			11,200	673	24,649	1,232		
Carp, German							4,207	$125
Flounders	38,320	5,364	360,895	50,506	73,191	2,338	805	44
Hake					10,550	211		
Herring	510	10			1,000	20		
Kingfish			290	6	81,486	1,629		
"Lingcod"	15	1			39,360	2,361		
Mackerel	180	9	24,450	1,222	12,346	370		
Perch	270	10	125	5	6,498	195		
Pilchard or sardines			190	2	1,990	40		
Pompano					33	10		
Rock bass			1,185	70				
Rockfishes	72,750	4,366	23,520	1,410	512,823	20,758		
Sablefish					53,018	1,590		
Salmon:								
Chinook	30	5			381,464	29,748	488,639	43,975
Silver					15,894	1,240		
Sea bass, black, or jewfish			352	55				
Sea bass, white, or squeteague	1,840	180	42,089	4,203	48,217	3,689		
Shad							137,969	7,278
Sheepshead			327	10				
Skates			2,500	50	3,100	62		
Smelts	62,700	3,762	21,600	1,296	95,263	7,621		
Sole	10,600	530	26,700	1,335	211,382	6,341		
Striped bass							67,468	9,444
Tomcod					265	7		
Whitefish			390	20				
Yellowtail			20,100	402				
Other fish	800	32	5,100	200	19,734	592	373	11
Crabs					2,222	250		
Spiny lobster			58,000	11,600				
Abalone	18,400	736						
Clams, hard					1,385	83		
Clams, Pismo	191,880	9,594	100	5				
Mussels	150	5			185	7		
Octopus					14,796	591		
Total	402,645	24,982	696,370	81,792	1,611,368	81,021	699,461	60,877

Items	Sonoma		Ventura		Yolo		Total	
PERSONS ENGAGED	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
On vessels fishing							1,331	
On vessels transporting							189	
In shore fisheries	11		7		32		3,136	
Shoresmen							4,517	
Total	11		7		32		9,173	
INVESTMENT								
Vessels fishing, steam							7	$238,800
Tonnage							319	
Outfit								38,130
Vessels fishing, gasoline							199	1,142,890
Tonnage							2,525	
Outfit								293,200
Vessels fishing, sail							3	59,250
Tonnage							1,043	
Outfit								16,000
Vessels transporting							53	614,670
Tonnage							2,906	
Outfit								45,263
Power boats	10	$11,350	1	$1,500	14	$4,010	1,297	1,660,560
Rowboats, scows, etc			2	100	8	850	292	29,671
Apparatus, vessel fisheries:								
Purse seines							54	120,000
Length, in yards							27,680	
Gill nets							383	11,840
Length, in yards							24,006	
Lampara nets							158	96,535
Paranzella nets							29	7,293

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	Sonoma		Ventura		Yolo		Total	
INVESTMENT—continued								
Apparatus, vessel fisheries—Con.	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Lines								$3,299
Trammel nets							493	17,560
Length, in yards							40,488	
Shrimp nets							30	700
Pots							730	1,900
Abalone outfit							3	2,800
Harpoons							4	26,800
Apparatus, shore fisheries:								
Gill nets					20	$2,000	2,437	159,965
Length, in yards					3,552		282,022	
Lines		$320		$30		2		35,102
Lampara nets							257	126,550
Haul seines	1	120	1	150	2	350	45	6,650
Length, in yards	93		100		430		8,528	
Trammel nets			8	320			1,413	43,526
Length, in yards			640				90,870	
Tongs, forks, rakes, and hoes	9	14					271	486
Fyke nets					127	762	222	1,332
Bag nets							74	2,200
Dip nets							12	24
Pots			70	200			3,819	10,515
Abalone outfit							2	1,800
Miscellaneous apparatus	145	355					3,222	6,710
Shore and accessory property		1,000				200		7,290,269
Cash capital								935,124
Total		13,159		2,300		8,174		13,047,414
PRODUCTS								
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna							25,252,392	$1,269,417
Anchovies							652,516	13,049
Barracuda			4,700	$423			6,284,065	439,817
Bonito and skipjack			590	35			11,648,413	578,150
Carp, German					1,131	$34	55,054	1,649
Catfish							7,361	1,005
Cod, salted							1,680,000	84,000
Flounders			4,360	612	1,514	46	4,742,819	470,813
Flyingfish							8,495	174
Grayfish							314,176	6,709
Hake							78,763	1,576
Halfmoon							27,791	832
Hardhead							18,206	1,183
Herring							341,614	6,832
Kingfish							579,754	11,595
"Lingcod"	596	$30					569,821	33,936
Mackerel			530	26			2,498,197	75,455
Mullet							148,628	16,341
Perch	70	2					236,431	9,056
Pike, Sacramento							7,370	230
Pilchard, or sardines							92,114,542	1,381,008
Pompano							16,494	5,049
Rock bass							285,494	16,449
Rockfishes	2,245	112	2,530	152			4,219,650	205,239
Sablefish							268,905	8,067
Salmon:								
Chinook	105,000	7,350			15,056	2,258	7,084,950	579,211
Silver							151,630	11,298
Sculpin							44,176	889
Sea bass, black, or jewfish							87,559	4,502
Sea bass, white, or squeteague			2,700	270			2,904,054	176,993
Shad					31,528	1,605	1,133,270	55,513
Sheepshead			25	1			18,245	194
Skates							121,753	2,437
Smelt	157	10	5,000	300			728,406	51,908
Sole			130	15			6,949,557	211,800
Splittail							10,408	310
Steelhead trout							2,490	174
Striped bass					3,446	517	678,820	62,747
Suckers							1,348	27
Swordfish							24,363	506
Tomcod							31,344	1,251
Whitebait							84,007	8,828
Whitefish							32,184	1,609
Yellowtail			270	6			3,416,572	68,671
Other fish			31,000	930			217,781	7,657
Crabs	12,804	582					844,472	66,543
Spiny lobster			6,350	1,270			966,632	86,302

Persons engaged, investment, and products of the fisheries of California in 1922, by counties—Continued

Items	Sonoma		Ventura		Yolo		Total	
PRODUCTS—continued	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Shrimp							990,349	$94,534
Abalone							1,523,543	60,943
Clams, hard	50	$3					34,189	2,280
Clams, Pismo							191,980	9,599
Clams, soft	3,621	181					341,173	22,114
Cockles	698	35					860	51
Mussels							13,212	580
Oysters, eastern, market							94,598	101,351
Octopus							99,274	3,409
Squid							208,875	9,200
Turtles							1,452	64
Sperm oil							37,875	2,525
Whale oil							6,862,500	366,000
Other whale products							3,136,000	64,330
Total	125,241	8,305	58,185	$4,040	52,675	$4,460	191,126,852	6,773,981

VESSEL FISHERIES

The fisheries of California in 1922 employed in actual fishing 7 steam, 199 gasoline, and 3 sailing vessels of 5 tons net burden and over, as measured by the Customs Service, not including 53 vessels engaged in transporting fish. The yield of the fishing vessels amounted to 77,556,811 pounds, valued at $2,523,979.

Judging from the value of the catch, lines were the most important gear employed in the vessel fisheries, producing 15,409,209 pounds, valued at $772,126. Albacore and tuna were most important in this catch, contributing over half the yield; bonito and skipjack followed, with about one-third of the catch; the cod caught in Alaskan waters and the rockfishes caught principally off Los Angeles and San Diego were next in order, while some 20 species of fish caught in smaller quantities made up the remainder of the catch by this type of gear.

Purse seines, operated principally from the port of Los Angeles, were next in importance, with a total catch of 8,500,584 pounds, valued at $420,373. Their most important catches were barracuda, 2,395,635 pounds, valued at $166,086; tuna, 3,891,781 pounds, valued at $142,084; bonito and skipjack, 736,331 pounds, valued at $36,710; and white sea bass, 616,114 pounds, valued at $36,056. A number of other fishes caught incidentally in fishing for these principal species made up the remainder of the catch by purse seines.

Lampara nets produced an amount of fish much in excess of that produced by purse seines and nearly equaling the purse-seine catch in value, altogether amounting to 31,692,669 pounds, valued at $412,662. Three-quarters of the catch by this gear consisted of sardines, while smaller amounts of bonito, barracuda, yellowtail, mackerel, white sea bass, and other fishes made up the remainder. Lampara nets were also important in providing bait for the line fishery, although the amount of bait caught does not enter these statistics.

Paranzella nets, operated exclusively from the port of San Francisco, produced 9,047,496 pounds, valued at $287,086. Soles, flounders, and other bottom fish made up the catch of this gear.

Gill nets, fished principally for barracuda and white sea bass, caught 566,727 pounds, valued at $32,228; trammel nets, catching almost

exclusively flounders, made a total catch of 526,533 pounds, valued at $72,168; abalone outfits, operated exclusively from Monterey County, produced 1,124,965 pounds, valued at $44,998; lobster pots in San Diego and Los Angeles Counties caught 562,253 pounds of spiny lobsters, valued at $44,983; and shrimp nets in San Francisco County yielded 90,000 pounds, valued at $4,500.

Whaling apparatus employed on vessels sailing from San Francisco and landing their whales at a shore station located at Moss Landing, furnished the raw material from which products valued at $432,855 were made.

The following table gives the statistics of the vessel fishery of California in 1922, by species, counties, and apparatus:

Yield of the vessel fisheries of California in 1922, by counties, apparatus, and species

Species	Los Angeles		San Diego		San Francisco		Total [1]	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:								
Albacore and tuna	3,595,889	$131,785	295,892	$10,299			3,891,781	$142,084
Barracuda	2,343,435	162,429	52,200	3,657			2,395,635	166,086
Bonito and skipjack	675,231	33,655	61,100	3,055			736,331	36,710
Flounders	129,594	18,006	3,100	434			132,694	18,440
Flying fish	380	9					380	9
Kingfish	515	10					515	10
Mackerel	100,542	3,012	1,000	30			101,542	3,042
Mullet	13,328	1,458					13,328	1,458
Perch	16,445	830					16,445	830
Pilchard or sardines	20,830	208					20,830	208
Pompano	769	257					769	257
Rock bass	23,176	1,389					23,176	1,389
Rockfishes	3,984	238	30	2			4,014	240
Sculpin	720	17					720	17
Sea bass, black, or jewfish	31,164	1,693	100	4			31,264	1,697
Sea bass, white, or squeteague	604,774	35,376	11,340	680			616,114	36,056
Sheepshead	150	1					150	1
Skates	35	1					35	1
Smelt	9,159	640					9,159	640
Sole	15,855	792	1,400	70			17,255	862
Swordfish	750	23					750	23
Tomcod	90	4					90	4
Whitefish	3,500	175					3,500	175
Yellowtail	409,679	8,182	69,000	1,720			478,679	9,902
Other fish	1,397	43					1,397	43
Spiny lobster	27	2					27	2
Squid	2,627	131					2,627	131
Turtles	1,377	56					1,377	56
Total	8,005,422	400,422	495,162	19,951			8,500,584	420,373
Gill nets:								
Barracuda	106,876	7,478	92,800	6,404			199,676	13,882
Bonito	14,650	733	144,900	5,545			159,550	6,278
Flounders			14,500	2,530			14,500	2,530
Flying fish	200	5					200	5
Grayfish	4,450	89	11,200	344			15,650	433
Mackerel	27,118	813	3,400	102			30,518	915
Perch	311	16	300	15			611	31
Rock bass			400	24			400	24
Rockfishes	27	2					27	2
Sea bass, black, or jewfish	1,340	56	2,720	95			4,060	151
Sea bass, white, or squeteague	65,265	3,923	60,500	3,630			125,765	7,553
Smelt	1,197	83	600	42			1,797	125
Sole			150	8			150	8
Yellowtail	1,600	32	10,800	216			12,400	248
Other fish	1,423	43					1,423	43
Total	224,457	13,273	342,270	18,955			566,727	32,228

[1] Includes 1,124,965 pounds of abalone, caught in Monterey County, and valued at $44,998.

Yield of the vessel fisheries of California in 1922, by counties, apparatus, and species—Continued

Species	Los Angeles		San Diego		San Francisco		Total	
Lampara nets:	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Barracuda	240,015	$16,800	39,680	$2,760			279,695	$19,560
Bonito	1,104,908	55,212	88,400	4,420			1,193,308	59,632
Flounders	6,330	886					6,330	886
Grayfish	25	1	300	12			325	13
Kingfish	25,301	506	3,235	71			28,536	577
"Lingcod"	172	8					172	8
Mackerel	246,374	7,391	62,450	1,874			308,824	9,265
Perch	400	20					400	20
Pilchard or sardines	27,085,392	282,222	2,247,800	22,478			29,333,192	304,700
Pompano	579	231					579	231
Rock bass	5,820	349	200	12			6,020	361
Rockfishes	2,040	122					2,040	122
Sea bass, black, or jewfish	1,505	60	200	8			1,705	68
Sea bass, white, or squeteague	98,365	5,903	17,900	1,086			116,265	6,989
Skates	185	4					185	4
Smelt	9,177	642	5,780	403			14,957	1,045
Sole	6,362	318	1,100	55			7,462	373
Swordfish	300	6	100	3			400	9
Whitefish			40	2			40	2
Yellowtail	200,284	4,004	159,700	3,194			359,984	7,198
Other fish	655	19					655	19
Squid	95	5	31,500	1,575			31,595	1,580
Total	29,034,284	374,709	2,658,385	37,953			31,692,669	412,662
Paranzella nets:								
Flounders					1,600,941	$51,207	1,600,941	51,207
Grayfish					58,631	1,173	58,631	1,173
Hake					68,213	1,365	68,213	1,365
Kingfish					1,825	37	1,825	37
"Lingcod"					249,361	14,960	249,361	14,960
Perch					300	9	300	9
Pompano					1,376	412	1,376	412
Rockfishes					289,498	14,050	289,498	14,050
Sablefish					75,753	2,273	75,753	2,273
Pilchard or sardines					2,245	45	2,245	45
Sea bass, white, or squeteague					3,423	308	3,423	308
Skates					110,538	2,212	110,538	2,212
Smelt					4,037	322	4,037	322
Sole					6,474,454	194,233	6,474,454	194,233
Tomcod					5,445	218	5,445	218
Other fish					93,860	3,754	93,860	3,754
Crabs					4,008	333	4,008	333
Clams, hard					22	1	22	1
Clams, soft					26	2	26	2
Octopus					3,540	172	3,540	172
Total					9,047,496	287,086	9,047,496	287,086
Lines:								
Albacore and tuna	3,979,546	213,529	4,130,505	202,757			8,110,051	416,286
Barracuda	12,930	905	54,600	3,918			67,530	4,823
Bonito	2,438,605	121,927	2,240,800	109,494			4,679,405	231,421
Cod, salted					1,680,000	84,000	1,680,000	84,000
Founders			8,860	1,207			8,860	1,207
Grayfish			14,500	539			14,500	539
Kingfish			1,000	20			1,000	20
Mackerel	600	18	5,490	164			6,090	182
Mullet			6,800	748			6,800	748
Perch			200	11			200	11
Pompano			220	88			220	88
Rock bass			13,350	801			13,350	801
Rockfishes	22,112	1,327	318,180	19,089			340,292	20,416
Sculpin			200	4			200	4
Sea bass, black, or jewfish	920	37	8,425	294			9,345	331
Sea bass, white, or squeteague			25,300	2,278			25,300	2,278
Sheepshead	40	1	520	9			560	10
Skates	760	15					760	15
Smelt			50	3			50	3
Sole			50	2			50	2
Swordfish	780	25					780	25
Whitefish			870	44			870	44
Yellowtail	39,896	798	403,100	8,074			442,996	8,872
Total	6,496,189	338,582	7,233,020	349,544	1,680,000	84,000	15,409,209	772,126

Yield of the vessel fisheries of California in 1922, by counties, apparatus, and species—Continued

Species	Los Angeles		San Diego		San Francisco		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Trammel nets:								
Barracuda			14,300	$801			14,300	$801
Founders	118,872	$16,641	389,100	54,510			507,972	71,151
Kingfish			100	2			100	2
Perch	477	24					477	24
Rockfishes			410	24			410	24
Sea bass, black, or jewfish	455	18					455	18
Sea bass, white, or squeteague			400	24			400	24
Smelt			300	21			300	21
Sole	2,009	100	10	1			2,019	101
Yellowtail			100	2			100	2
Total	121,813	16,783	404,720	55,385			526,533	72,168
Shrimp nets: Shrimp					90,000	$4,500	90,000	4,500
Pots: Spiny lobsters	23,858	1,908	538,395	43,075			562,253	44,983
Harpoons:								
Sperm oil					37,875	2,525	37,875	2,525
Whale oil					6,862,500	366,000	6,862,500	366,000
Other whale products					3,136,000	64,330	3,136,000	64,330
Total					10,036,375	432,855	10,036,375	432,855
Grand total	43,906,023	1,145,677	11,671,952	524,863	20,853,871	808,441	77,556,811	2,523,979

SHORE AND BOAT FISHERIES

The shore and boat fisheries of California in 1922 employed 3,133 fishermen on 1,207 power boats and 292 rowboats, scows, and similar inshore fishing craft. The total yield was 113,570,041 pounds, valued at $4,250,002.

As in the vessel fisheries, the greatest production was by lines, which contributed 28,067,355 pounds, valued at $1,529,745. Albacore and tuna yielded 13,250,560 pounds, valued at $711,047; salmon 4,270,980 pounds, valued at $337,689; rockfishes, 3,582,283 pounds, valued at $170,320; bonito and skipjack, 2,844,417 pounds, valued at $142,277; barracuda, mackerel, and yellowtail in considerable amounts, and other fishes in lesser amounts.

Lampara nets followed lines in importance. Their total yield was 69,763,499 pounds, valued at $1,353,915, made up largely of sardines, bonito and skipjack, barracuda, mackerel, white sea bass, and yellowtail.

Gill nets yielded 9,072,270 pounds, valued at $628,285. About one-third of this was salmon; one-fifth, barracuda; one-sixth, white sea bass; one-tenth, striped bass; and one-tenth, shad. Other fishes were caught in smaller amounts.

Trammel nets yielded 2,460,900 pounds, valued at $319,756, consisting almost entirely of flounders. Haul seines yielded a total catch of 795,421 pounds, valued at $61,815, consisting principally of chinook salmon and smelts.

Bag nets catching herring and shrimp; fyke nets catching carp, catfish, hardhead, Sacramento pike, and splittail; dip nets catching perch; lobster pots catching spiny lobsters; abalone outfits yielding abalone; tongs, forks, rakes, hoes, and miscellaneous apparatus employed in fishing for shellfish, produced the remainder of the catch of the shore fisheries.

The following tables give the yield of the shore fisheries of California in 1922 by species, apparatus, and counties:

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus

BY HAUL SEINES

Species	Coluso		Del Norte		Glenn		Humboldt		Marin	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders							16,343	$817	25	$1
Herring							6,222	124	12,650	253
"Lingcod"									86	5
Perch			1,402	$56			43,077	1,723	25,500	765
Pike, Sacramento					153	$8				
Pilchard or sardines									125	3
Salmon, chinook	11,164	$1,786	50,000	3,500	52,129	8,340				
Smelt			2,447	147			26,510	1,590		
Striped bass	166	26			104	16				
Turbot									784	157
White bait							20,874	1,252	132	16
Octopus									50	2
Turtles	75	8								
Total	11,405	1,820	53,849	3,703	52,386	8,364	113,026	5,506	39,352	1,202

Species	Monterey		Orange		Sacramento		Santa Barbara		Santa Cruz	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp, German					4,158	$124				
Flounders			265	$10						
Hardhead					3,206	208				
Kingfish			106	2						
Mackerel							14,450	$722		
Perch							125	5		
Pilchard or sardines			1,360	14			190	2		
Salmon, chinook					7,921	950				
Sheepshead							327	10		
Smelt	33,329	$2,666	134,942	9,445			21,600	1,296	60,000	$4,800
Suckers					1,348	27				
Mussels									185	7
Total	33,329	2,666	136,673	9,471	16,633	1,309	36,692	2,035	60,185	4,807

Species	Solano		Sonoma		Ventura		Yolo		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp, German									4,158	$124
Flounders									16,633	828
Hardhead									3,206	208
Herring									18,872	377
Kingfish									106	2
"Lingcod"									86	5
Mackerel					530	$26			14,980	748
Perch			70	$2					70,174	2,551
Pike, Sacramento									153	8
Pilchard or sardines									1,675	19
Salmon, chinook	196,377	$17,673	5,000	350			10,000	$1,500	332,591	34,099
Seabass, white, or squeteague					2,700	270			2,700	270
Shad							6,057	321	6,057	321
Sheepshead									327	10
Smelt			157	10	5,000	300			283,985	20,254
Striped bass									270	42
Suckers									1,348	27
Turbot									784	157
Whitebait									21,006	1,268
Other fish					16,000	480			16,000	480
Mussels									185	7
Octopus									50	2
Turtles									75	8
Total	196,377	17,673	5,227	362	24,230	1,076	16,057	1,821	795,421	61,815

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus—Continued

BY GILL NETS

Species	Alameda		Colusa		Contra Costa		Del Norte	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp, German					35,456	$1,063		
Catfish					243	9		
Flounders					2,409	72		
Grayfish	560	$11						
Herring	30,000	600						
Perch	31	1			30	1		
Pike, Sacramento					4,249	127		
Salmon:								
Chinook			1,500	$240	767,795	69,101	1,033,342	$72,334
Silver							19,288	1,350
Shad	50	3			799,985	40,744		
Smelt	10,783	862						
Splittail	196	5			1,018	30		
Steelhead trout							2,490	174
Striped bass	10,000	1,400			331,792	11,504		
Other fish	109	3			978	30		
Total	51,729	2,885	1,500	240	1,943,955	122,681	1,055,120	73,858

Species	Imperial		Los Angeles		Marion		Monterey	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Barracuda			1,821,409	$127,498				
Bonito and skipjack			85,288	4,264				
Flying fish			7,915	160				
Halfmoon			8,000	240				
Kingfish			26,303	526				
Mackerel			150,233	4,507				
Mullet	106,500	$11,715						
Perch			36,000	1,800	5,123	$154	15,741	$472
Pompano			8,800	2,640				
Rock bass			1,547	93				
Rockfishes			546	32				
Salmon:								
Chinook							79,461	6,357
Silver							3,310	264
Sculpin			15	1				
Sea bass, white, or squeteague			1,010,622	60,637	12,191	917	597	41
Smelt					19,916	1,183	30,000	2,400
Swordfish			590	12				
Yellowtail			70	2				
Other fish			11,639	352				
Total	106,500	11,715	3,168,977	202,764	37,230	2,254	129,109	9,534

Species	Orange		Sacramento		San Diego		San Francisco	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Barracuda	8,831	$619			58,600	$3,797		
Bonito and skipjack					266,000	13,300		
Carp, German			3,000	$90				
Flounders							20,182	$605
Grayfish					52,500	1,100	5,010	100
Hardhead			5,000	325				
Mackerel	30,383	912			2,000	60		
Perch	912	46					45,944	1,378
Pike, Sacramento							487	15
Pilchard or sardines					6,000	60		
Rock bass	325	20			2,100	126		
Rockfishes					200	12		
Salmon: Chinook			150,000	18,000				
Sculpin					100	3		
Sea bass, white, or squeteague	26,054	1,568			321,200	19,252	27,927	2,512
Shad			47,438	1,664			31,633	950
Smelt					300	21		
Striped bass			8,317	1,247			166,761	25,014
Whitefish					40	2		
Total	66,505	3,165	213,755	21,326	709,040	37,733	297,944	30,574

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus—Continued

BY GILL NETS—Continued

Species	San Joaquin		San Luis Obispo		Santa Barbara		Santa Cruz	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Barracuda					95,192	$8,567		
Bonito and skipjack					6,200	373		
Herring			510	$10			1,000	$20
Perch			270	10			3,498	105
Salmon:								
Chinook	238,637	$21,477					45,464	2,868
Silver							1,894	120
Sea bass, white, or squeteague			1,840	180	42,089	4,208	44,016	3,521
Shad	84,667	3,269						
Smelt			62,700	3,762			35,263	2,821
Striped bass	83,895	12,584						
Yellowtail					5,100	102		
Other fish					5,100	200		
Total	407,199	37,330	65,320	3,962	153,681	13,450	131,135	9,455

Species	Solano		Yolo		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Barracuda					1,984,032	$140,481
Bonito and skipjack					357,488	17,937
Carp, German	4,207	$125			42,663	1,278
Catfish					243	9
Flounders	805	44	1,514	$46	24,910	767
Flying fish					7,915	160
Grayfish					58,070	1,211
Halfmoon					8,000	240
Hardhead					5,000	325
Herring					31,510	630
Kingfish					26,303	526
Mackerel					182,616	5,479
Mullet					106,500	11,715
Perch					107,549	3,967
Pike, Sacramento					4,736	142
Pilchard or sardines					6,000	60
Pompano					8,800	2,640
Rock bass					3,972	239
Rockfishes					746	44
Salmon:						
Chinook	287,262	25,852	5,056	758	2,608,517	216,987
Silver					24,492	1,734
Sculpin					115	4
Sea bass, white, or squeteague					1,486,536	92,836
Shad	137,969	7,278	25,471	1,284	1,127,213	55,192
Smelt					158,962	11,049
Splittail					1,214	35
Steelhead trout					2,490	174
Striped bass	67,468	9,444	3,446	517	671,679	61,710
Swordfish					590	12
Whitefish					40	2
Yellowtail					5,170	104
Other fish	373	11			18,199	596
Total	498,084	42,754	35,487	2,605	9,072,270	628,285

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus—Continued

BY LAMPARA NETS

Species	Los Angeles		Monterey		Orange		San Diego	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Anchovies	364,797	$7,295	136,433	$2,728			500	$10
Barracuda	215,890	15,095	13,031	912			264,800	18,536
Bonito and skipjack	1,177,914	58,895					500,000	25,000
Flounders	8,267	826					20	3
Halfmoon	42	2						
Kingfish	185,540	3,711	153,019	3,060			5,400	102
"Lingcod"			50,000	3,000				
Mackerel	523,467	15,702	337,137	10,115	578	$16	58,000	1,740
Perch	1,527	76						
Pilchard or sardines	17,451,846	174,521	44,676,589	893,531			452,000	4,520
Pompano	3,224	967	448	134				
Rock bass	39,512	2,330			633	37		
Sablefish			3,879	116				
Sea bass, black, or jewfish	4,409	265						
Sea bass, white, or squeteague	400,215	24,013	15,135	605	1,646	100		
Smelt	149,588	10,535					20,200	1,084
Sole	75,629	3,781	62,745	1,882			1,000	50
Whitefish	19,919	995						
Yellowtail	369,069	7,381			244	5	729,600	14,592
Other fish	10,462	315	8,475	254				
Squid	20,050	1,000	124,103	4,964			30,500	1,525
Total	21,021,367	327,705	45,580,994	921,301	3,101	158	2,062,020	67,162

Species	San Francisco		Santa Cruz		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Anchovies	150,786	$3,016			652,516	$13,049
Barracuda			517	$36	494,238	34,579
Bonito and skipjack					1,677,914	83,895
Flounders					8,287	829
Hake			10,550	211	10,550	211
Halfmoon					42	2
Herring	250,887	5,018			250,887	5,018
Kingfish	1,609	32	31,486	629	377,054	7,534
"Lingcod"			25,360	1,521	75,360	4,521
Mackerel					919,182	27,573
Perch					1,527	76
Pilchard or sardines	168,175	3,364	1,990	40	62,750,600	1,075,976
Pompano	309	90	33	10	4,014	1,201
Rock bass					40,145	2,367
Sablefish			53,018	1,590	56,897	1,706
Sea bass, black, or jewfish					4,409	265
Sea bass, white, or squeteague					416,996	24,718
Smelt	81,371	6,510			251,159	18,129
Sole			211,382	6,341	350,756	12,054
Tomcod	25,544	1,022	265	7	25,809	1,029
Whitebait	63,001	7,560			63,001	7,560
Whitefish					19,919	995
Yellowtail					1,098,913	21,978
Other fish			19,734	592	38,671	1,161
Squid					174,653	7,489
Total	741,682	26,612	354,335	10,977	69,763,499	1,353,915

BY TRAMMEL NETS

Species	Los Angeles		Monterey		Orange		San Diego	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders	1,403,358	$196,316	26,550	$1,894	87,741	$12,280	314,520	$44,033
Grayfish							35,000	700
Halfmoon	7,353	220						
Perch	4,802	240					1,600	80
Rock bass							64,000	3,200
Rockfishes							340	21
Sole	140	7						
Whitefish							1,300	65
Total	1,415,653	196,783	26,550	1,894	87,741	12,280	416,760	48,099

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus—Continued

BY TRAMMEL NETS—Continued

Species	Santa Barbara		Santa Cruz		San Luis Obispo		Ventura		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders	360,895	$50,506	73,191	$2,338	38,320	$5,364	4,360	$612	2,308,935	$313,343
Grayfish									35,000	700
Halfmoon									7,353	220
Perch									6,402	320
Rock bass									64,000	3,200
Rockfishes									340	21
Sole	26,700	1,335			10,600	530	130	15	37,430	1,880
Whitefish									1,300	65
Total	387,595	51,841	73,191	2,338	48,920	5,894	4,490	627	2,460,900	319,756

BY FYKE NETS

Species	Sacramento		San Joaquin		Yolo		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp, German	4,000	$120	3,102	$93	1,131	$34	8,233	$247
Catfish	7,118	996					7,118	996
Hardhead	10,000	650					10,000	650
Pike, Sacramento	1,466	50	1,015	30			2,481	80
Splittail	7,587	227	1,607	48			9,194	275
Total	30,171	2,043	5,724	171	1,131	34	37,026	2,248

BY BAG NETS

Species	Alameda		Marin		San Francisco		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Herring	40,345	$807					40,345	$807
Shrimp	44,124	4,412	126,950	$12,695	729,275	$72,927	900,349	90,034
Total	84,469	5,219	126,950	12,695	729,275	72,927	940,694	90,841

BY DIP NETS

Species	Humboldt	
	Pounds	*Value*
Perch	24,000	$960

BY LINES

Species	Alameda		Contra Costa		Del Norte		Humboldt	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders	1,500	$45			707	$64	47,309	$4,258
Grayfish	600	12						
Kingfish	25	1						
"Lingcod"					3,645	182	12,060	603
Rockfishes					9,132	457	10,010	500
Salmon:								
Chinook	7,000	630	25,000	$2,250	2,478	174	875,246	70,020
Silver							36,468	2,917
Sea bass, white, or squeteague					133	11		
Smelt	4,000	320						
Sole							166	10
Striped bass	3,454	483						
Other fish							2,768	138
Total	16,579	1,491	25,000	2,250	16,095	888	984,027	78,446

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus—Continued

BY LINES—Continued

Species	Los Angeles		Marin		Mendocino		Monterey	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna	12,784,037	$684,259					236	$11
Barracuda	211,376	14,796						
Bonito and skipjack	1,706,712	85,336					2,106	105
Flounders	11,477	346	1,118	$90	37,148	$3,714		
Halfmoon	12,396	370						
Kingfish	15,000	300					75,000	1,500
"Lingcod"					6,873	344	35,526	2,132
Mackerel	660,547	19,816					200,000	6,000
Perch							5,000	150
Pompano	736	220						
Rock bass	76,618	4,597						
Rockfishes	975,880	58,524	183	14	1,485	74	1,261,424	47,143
Salmon:								
Chinook			230,108	23,010	1,456,090	101,926	384,000	30,720
Silver					60,670	4,247	16,000	1,280
Sculpin	37,421	748						
Sea bass, black, or jewfish	33,582	1,819						
Sea bass, white, or squeteague	64,046	3,841	7,000	420			30,000	1,200
Sheepshead	1,183	12						
Skates	2,958	59					908	18
Sole	15,889	795						
Striped bass			3,417	512				
Swordfish	20,143	403						
Whitefish	5,025	251						
Yellowtail	501,043	10,021						
Other fish	12,000	360						
Octopus	5,981	235						
Total	17,154,050	887,108	241,826	24,046	1,562,266	110,305	2,010,200	90,259

Species	Orange		San Diego		San Francisco		Santa Barbara		Santa Cruz	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna	18,082	$1,085	446,140	$25,542			2,065	$150		
Barracuda	602	40	628,000	43,960	81	$8				
Bonito and skipjack	60	4	1,105,300	55,265			5,000	300	24,649	$1,232
Flounders	325	45			12,389	906				
Grayfish			101,400	2,028	30,000	600				
Kingfish			4,000	80			290	6	50,000	1,000
"Lingcod"			1,130	50	170,997	10,260			14,000	840
Mackerel	672	20	50,700	1,536			10,000	500	12,346	370
Mullet			22,000	2,420						
Perch	246	12	100	5					3,000	90
Rock bass	5,528	335	51,100	3,066			1,185	70		
Rockfishes	15,990	960	236,672	14,200	457,639	21,650	23,520	1,410	512,823	20,758
Sablefish					136,255	4,088				
Salmon:										
Chinook					722,890	65,060			336,000	26,880
Silver									14,000	1,120
Sculpin	20	1	5,700	115						
Sea bass, black, or jewfish	287	18	2,100	80			352	55		
Sea bass, white, or squeteague	2,175	141	3,000	180					4,201	168
Sheepshead			16,000	160						
Skates	719	15			50	1	2,500	50	3,100	62
Sole	3,170	160	5,100	250	35,516	1,065				
Swordfish			1,700	34						
Whitefish			1,100	55			390	20		
Yellowtail	1,017	20	501,000	10,020			15,000	300		
Other fish	1,756	81	11,020	331	4,232	169				
Total	50,649	2,937	3,193,262	159,377	1,570,049	103,807	60,302	2,861	974,119	52,520

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus—Continued

BY LINES—Continued

Species	San Luis Obispo		Solano		Sonoma		Ventura		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore and tuna									13, 250, 560	$711, 047
Barracuda	4, 200	$378					4, 700	$423	848, 959	59, 605
Bonito and skipjack							590	35	2, 844, 417	142, 277
Flounders									111, 973	9, 468
Grayfish									132, 000	2, 640
Halfmoon									12, 396	370
Kingfish									144, 315	2, 887
"Lingcod"	15	1			596	$30			244, 842	14, 442
Mackerel	180	9							934, 445	28, 251
Mullet									22, 000	2, 420
Perch									8, 346	257
Pompano									736	220
Rock bass									134, 431	8, 068
Rockfishes	72, 750	4, 366			2, 245	112	2, 530	152	3, 582, 283	170, 320
Sablefish									136, 255	4, 088
Salmon:										
Chinook	30	5	5, 000	$450	100, 000	7, 000			4, 143, 842	328, 125
Silver									127, 138	9, 564
Sculpin									43, 141	864
Sea bass, black, or jewfish									36, 321	1, 972
Sea bass, white, or squeteague									110, 555	5, 961
Sheepshead							25	1	17, 208	173
Skates									10, 235	205
Smelt									4, 000	320
Sole									59, 841	2, 280
Striped bass									6, 871	995
Swordfish									21, 843	437
Whitefish									6, 515	326
Yellowtail							270	6	1, 018, 330	20, 367
Other fish	800	32					15, 000	450	47, 576	1, 561
Octopus									5, 981	235
Total	77, 975	4, 791	5, 000	450	102, 841	7, 142	23, 115	1, 067	28, 067, 355	1, 529, 745

BY LOBSTER POTS AND ABALONE OUTFITS

Species	Los Angeles		Monterey		Orange		San Diego	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Spiny lobsters	134, 615	$10, 964			17, 504	$2, 107	187, 883	$15, 376
Abalone			379, 978	$15, 199				

Species	San Luis Obispo		Santa Barbara		Ventura		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Spiny lobsters			58, 000	$11, 600	6, 350	$1, 270	404, 352	$41, 317
Abalone	18, 400	$736					398, 378	15, 935

BY TONGS, FORKS, RAKES, HOES, AND BY HAND

Species	Alameda		Contra Costa		Humboldt		Los Angeles	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Clams, hard					20, 242	$1, 013	2, 290	$160
Clams, soft	14, 575	$874	184, 737	$9, 236	2, 516	125		
Cockles							162	16
Mussels	2, 724	109						
Total	17, 299	983	184, 737	9, 236	22, 758	1, 138	2, 452	176

Yield of the shore fisheries of California in 1922, by counties, species, and apparatus—Continued

BY TONGS, FORKS, RAKES, HOES, AND BY HAND—Continued

Species	Marin		Orange		San Diego		San Francisco		Santa Cruz	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Abalone					200	$10				
Clams, hard	10,200	$1,020							1,385	$83
Clams, soft	80,890	8,956					54,808	$2,740		
Mussels			897	$89			9,256	370		
Oysters, eastern, market	94,598	101,351								
Total	185,688	111,327	897	89	200	10	64,064	3,110	1,385	83

Species	San Luis Obispo		Santa Barbara		Sonoma		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Abalone							200	$10
Clams, hard					50	$3	34,167	2,279
Clams, Pismo	191,880	$9,594	100	$5			191,980	9,599
Clams, soft					3,621	181	341,147	22,112
Cockles					698	35	860	51
Mussels	150	5					13,027	573
Oysters, eastern, market							94,598	101,351
Total	192,030	9,599	100	5	4,369	219	675,979	135,975

BY MISCELLANEOUS APPARATUS

Species	Alameda		Del Norte		Humboldt		Marin		Monterey	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crabs	1,804	$250	15,862	$721	115,236	$5,238	27,500	$3,750	44	$3
Octopus			83	4					66,802	2,004
Total	1,804	250	15,945	725	115,236	5,238	27,500	3,750	66,846	2,007

Species	San Francisco		Santa Cruz		Sonoma		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crabs	664,992	$55,416	2,222	$250	12,804	$582	840,464	$66,210
Octopus	8,022	401	14,796	591			89,703	3,000
Total	673,014	55,817	17,018	841	12,804	582	930,167	69,210

CANNING INDUSTRY

In 1922 there were 36 canning establishments in California. These employed 3,370 persons, paid wages amounting to $1,562,469, had an investment of $5,562,594, and produced a quantity of canned fishery products equal to 1,068,727 cases of forty-eight 1-pound cans each, valued at $8,119,109. The sardine was the most important species canned, having a production in this year equal to 715,359 cases, each containing forty-eight 1-pound cans, and valued at $3,361,480. The group of tuna and tunalike fishes, consisting of albacore, yellowfin tuna, bluefin tuna, striped tuna or skipjack, bonito, and yellowtail, produced a total pack exceeding that of sardines in value though not in quantity. It amounted to a quantity equal to 336,141 cases of forty-eight 1-pound cans each, valued at $4,511,873. The pack of canned salmon amounted to 11,831 cases of forty-eight 1-pound cans, valued at $196,310, and the pack of miscellaneous fishery products amounted to 5,396 cases of forty-eight 1-pound cans, valued at $49,446.

The following table gives the statistics of the canning industry of California in 1922:

Canning industry of California in 1922

Items	Number	Number	Value
Establishments	36		$5,071,744
Cash capital			490,850
Persons engaged	3,370		
Wages paid			1,562,469
PRODUCTS			
Salmon, chinook:	*Cases as packed*	*Standard cases* [1]	*Value*
½-lb. flat (48 to case)	15,338	7,669	138,042
1-lb. flat (48 to case)	4,162	4,162	58,268
Total		11,831	196,310
Sardines:			
In oil—			
¼-lb. square (100 to case)	21,086	10,982	217,763
½-lb. square (100 to case)	2,413	2,514	28,952
½-lb. oval (48 to case)	376	188	4,512
1-lb. oval (48 to case)	650	650	2,600
In mustard—			
1-lb. oval (48 to case)	53,993	53,993	295,111
In tomato sauce—			
¼-lb. square (100 to case)	38	20	190
½-lb. square (100 to case)	482	502	3,401
½-lb. oval (48 to case)	4,296	2,148	14,835
1-lb. oval (48 to case)	601,111	601,111	2,518,843
1-lb. tall (48 to case)	78	78	232
All others—			
½-lb. oval (48 to case)	2,567	1,284	12,835
1-lb. oval (48 to case)	41,889	41,889	262,206
Total		715,359	3,361,480
Albacore:			
¼-lb. round (48 to case)	24,962	6,240	126,139
¼-lb. round (100 to case)	14,820	7,719	222,300
½-lb. round (48 to case)	188,235	94,118	1,368,883
½-lb. round (50 to case)	9,436	4,914	108,514
1-lb. round (48 to case)	34,475	34,475	466,399
4-lb. tall (12 to case)	635	635	12,700
Total		148,101	2,304,935
Tuna, bluefin and yellowfin:			
¼-lb. round (48 to case)	37,537	9,384	154,757
¼-lb. round (100 to case)	2,390	1,245	24,083
Tuna, bluefin and yellowfin—Con.			
½-lb. round (48 to case)	101,737	50,868	$613,344
1-lb. round (48 to case)	22,926	22,926	255,437
Total		84,423	1,047,621
Tuna, striped:			
¼-lb. round (48 to case)	34,772	8,693	126,678
¼-lb. round (100 to case)	3,162	1,647	33,690
½-lb. round (48 to case)	122,310	61,155	622,565
1-lb. round (48 to case)	17,502	17,502	159,423
Total		88,997	942,356
"Tonno:"			
¼-lb. round (48 to case)	21,221	5,305	110,919
¼-lb. round (100 to case)	1,467	764	14,670
½-lb. round (48 to case)	1,575	788	13,478
Total		6,857	139,067
Bonito:			
¼-lb. round (100 to case)	5,223	2,720	34,879
½-lb. round (48 to case)	5,368	2,684	24,021
Total		5,404	58,900
Yellowtail:			
½-lb. round (48 to case)	4,088	2,044	17,104
1-lb. tall (48 to case)	315	315	1,890
Total		2,359	18,994
Miscellaneous: [2]			
¼-lb. round (48 to case)	1,336	334	4,866
½-lb. round (48 to case)	2,474	1,237	11,716
½-lb. flat (48 to case)	220	110	5,280
1-lb. round (48 to case)	219	219	1,861
1-lb. oval (48 to case)	205	205	1,640
1-lb. tall (48 to case)	3,291	3,291	24,085
Total		5,396	49,446
Grand total		1,068,727	8,119,109

[1] Cases shown in this column have been reduced to the standard basis of forty-eight 1-pound cans.
[2] Includes fish flakes, abalone, mackerel, squid, shad, and shad roe.

WHOLESALE FISH TRADE

The wholesale fish trade of California in 1922 was conducted in 60 establishments valued at $1,023,904 and employing $195,074 cash capital and 456 persons, who received wages totaling $487,115.

The following table gives the detailed statistics of the wholesale fish trade of California in 1922:

Investment, persons engaged, and wages paid in the wholesale fish trade of California in 1922

Localities	Establishments		Cash capital	Persons engaged	Wages paid
	Number	*Value*			
San Francisco	11	$47,730	$30,000	64	$64,417
Oakland	4	69,950	30,700	31	54,550
San Pedro	11	501,209	28,014	68	80,208
San Diego	8	121,293	29,860	118	99,023
Los Angeles	8	136,682	38,000	88	127,265
Monterey	3	22,740	3,000	12	6,240
Sacramento and Pittsburg	3	46,500	8,500	19	8,860
Miscellaneous localities	12	77,800	27,000	56	46,552
Total	60	1,023,904	195,074	456	487,115

FISHERIES OF THE PACIFIC COAST STATES, 1923

Realizing the value, both to the conservationist and to the fish trade, of annual statistics on our fisheries, the general canvass of the Pacific Coast States for 1922 was followed by a similar though less detailed canvass for 1923. This was done in part to determine the feasibility of taking annual statistics with the limited personnel and funds available for this purpose. The Pacific Coast States were particularly favorable for such a trial, for a certain amount of statistics on the fisheries are collected annually by the State organizations responsible for the administration of the fisheries of those States. In California statistics were available on the number and type of fishing boats and vessels, number of fishermen, and the catch of each species by counties or by groups of counties. In Washington and Oregon statistics were available on the number of fishermen and the catch of certain fishes in Territorial waters. The statistics given herein are the available State statistics, supplemented and made uniform in character and scope by canvassing the industry for the necessary additional information.

In 1922 the total number of fishermen in the Pacific Coast States was 14,223, the number of fishing vessels 555, the number of boats 5,741, and the total catch 409,885,597 pounds, valued at $18,914,976. The following table gives the detailed statistics, by States, of the Pacific Coast States in 1923:

Fisheries of the Pacific Coast States, 1923

Items	Washington		Oregon		California		Total	
Vessel fishery:	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Fishermen	1,945		15		1,972		3,932	
Vessels	267		3		285		555	
Tonnage	6,980		44		4,071		11,095	
Shore fishery:								
Fishermen	3,454		4,230		2,625		10,309	
Power boats	1,751		2,042		1,307		5,100	
Sail and row boats	289		233		135		657	
FISH	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore					12,514,833	$1,627,193	12,514,833	$1,627,193
Anchovies					307,074	19,292	307,074	19,292
Barracuda					7,200,575	575,285	7,200,575	575,285
Bonito					1,115,247	47,310	1,115,247	47,310
Carp	383,705	$11,511			148,607	2,972	532,312	14,483

Fisheries of the Pacific Coast States, 1923—Continued

Items	Washington		Oregon		California		Total	
FISH—continued	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Catfish	1,230	$62			129,286	$23,271	130,516	$23,333
Cod, fresh	162,642	7,167					162,642	7,167
Cod, salted	3,680,711	184,036			1,398,000	69,900	5,078,711	253,936
Eels					18,249	548	18,249	548
Dolly Varden trout	69	3					69	3
Flounders	195,600	4,092	5,000	$150	4,282,659	459,840	4,483,259	464,082
Grayfish	59,400	85			360,363	1,802	419,763	1,887
Hake					78,969	789	78,969	789
Halibut	24,151,374	3,183,820	864,166	136,056			25,015,540	3,319,876
Hardhead					9,563	96	9,563	96
Herring	425,389	4,254	93,750	1,876	383,950	3,994	903,089	10,124
Kingfish					411,564	10,301	411,564	10,301
"Lingcod"	223,088	5,292	77,500	2,325	467,357	23,369	767,945	30,986
Mackerel	20	1			3,592,446	144,082	3,592,466	144,083
Mullet					74,225	8,065	74,225	8,065
Perch	53,743	2,224	15,000	750	359,682	19,682	428,425	22,656
Pike, Sacramento					4,624	92	4,624	92
Pilchard or sardine					159,197,006	704,280	159,197,006	704,280
Pompano					32,918	13,298	32,918	13,298
Rock bass					357,269	30,301	357,269	30,301
Rockfishes	192,997	4,625	62,510	1,875	4,950,244	250,314	5,205,751	256,814
Sablefish	2,226,480	112,074	250,000	12,500	538,292	32,297	3,014,772	156,871
Salmon	71,720,053	3,512,467	27,278,859	3,057,937	7,090,260	638,122	106,089,172	7,208,526
Sculpin					60,466	6,046	60,466	6,046
Sea bass, black					226,995	22,168	226,995	22,168
Sea bass, white, or squeteague	532	13			2,520,263	224,869	2,520,795	224,882
Shad	88,767	2,710	403,859	6,072	1,285,383	58,088	1,778,009	66,870
Sheepshead					31,628	639	31,628	639
Skates	7,210	74			133,988	717	141,198	791
Skipjack or striped tuna					11,462,522	298,085	11,462,522	298,085
Smelt	1,178,551	28,623	277,195	2,771	806,380	24,149	2,262,126	55,543
Sole	119,904	3,637			7,086,035	286,631	7,205,939	290,268
Splittail					13,956	140	13,956	140
Steelhead trout	1,400,973	100,902	2,855,543	200,181	3,011	422	4,259,527	301,505
Striped bass					909,573	90,957	909,573	90,957
Sturgeon	84,057	6,798	124,121	9,928			208,178	16,726
Suckers					342	3	342	3
Swordfish					11,691	1,468	11,691	1,468
Tomcod	784	13	5,000	400	41,767	3,341	47,551	3,754
Tuna, bluefin					3,301,087	165,885	3,301,087	165,885
Tuna, yellowfin					10,836,925	600,412	10,836,925	600,412
Tuna, mixed					662,370	35,471	662,370	35,471
Whitefish					39,908	2,089	39,908	2,089
Yellowtail					3,979,611	217,050	3,979,611	217,050
Other fish					252,012	21,055	252,012	21,055
Total	106,357,279	7,174,483	32,312,503	3,432,821	248,689,175	6,766,180	387,358,957	17,373,484
SHELLFISH								
Crabs	1,145,540	54,384	359,283	47,737	1,075,800	148,459	2,580,623	250,580
Crawfish			141,800	12,000			141,800	12,000
Spiny lobster					1,092,858	225,656	1,092,858	225,656
Shrimp	34,657	4,504			1,113,358	66,801	1,148,015	71,305
Clams:								
Cockle					36,117	3,973	36,117	3,973
Hard	598,685	17,276					598,685	17,276
Mixed					25,845	2,076	25,845	2,076
Pismo					237,948	16,656	237,948	16,656
Razor	983,900	44,275	137,305	6,180			1,121,205	50,455
Soft			31,716	1,429	283,095	11,323	314,811	12,752
Mussels					60,026	3,002	60,026	3,002
Oysters, eastern, market					9,600	3,360	9,600	3,360
Oysters, native, market	2,739,960	267,000	19,200	16,800			2,759,160	283,800
Abalone					1,587,733	60,367	1,587,733	60,367
Octopus	52,377	1,573	71	4	110,222	11,022	162,670	12,599
Squid					1,180,446	7,680	1,180,446	7,680
Terrapin					1,270	77	1,270	77
Total	5,555,119	389,012	689,375	84,150	6,814,318	560,452	13,058,812	1,033,614
WHALE PRODUCTS								
Sperm oil	347,250	18,500			15,585	1,282	362,835	19,782
Whale oil	1,375,500	91,500			4,644,293	316,450	6,019,793	407,950
Other products	744,000	18,510			2,370,000	81,796	3,114,000	100,306
Total	2,466,750	128,510			7,029,878	399,528	9,496,628	528,038
Grand total	114,379,148	7,692,005	33,001,878	3,516,971	262,533,371	7,726,160	409,914,397	18,935,136

WASHINGTON

In 1923 the fisheries of Washington employed 5,399 fishermen, 267 fishing vessels, 1,751 power boats, 289 rowboats, sink floats, and scows, and yielded 114,379,148 pounds of fishery products, valued at $7,692,005.

The vessel fishery was carried on largely with gas vessels, all of the 267 mentioned above being of this type with the exception of 3 steamers at Grays Harbor engaged in whaling, 1 steamer and 2 schooners in King County in the line fishery, and 3 schooners in Skagit County also engaged in the line fishery. The total number of fishermen on vessels was 1,945, and the yield of vessels amounted to 56,323,616 pounds, valued at $4,358,928. The shore and boat fisheries employed 3,454 fishermen and yielded 58,055,532 pounds, valued at $3,333,077.

The following tables give the number, crew, and tonnage of fishing vessels, by apparatus employed and counties; the number of power and other boats employed in the shore or boat fisheries, by fishing apparatus and counties; the number of fishermen in the shore and boat fisheries, by counties; the yield of the vessel fisheries, by counties; the yield of the shore or boat fisheries, by counties; and the total yield of the fisheries of Washington, by counties.

Vessels engaged in the fisheries of Washington in 1923, by apparatus and persons

Fishery	Grays Harbor County			Island County			Jefferson County			King County		
	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage
	Number	*Number*	*Net tons*	*Number*	*Number*	*Net tons*	*Number*	*Number*	*Net tons*	*Number*	*Number*	*Net tons*
Lines							2	6	13	134	924	3,335
Purse seines	2	14	48	1	7	10	1	8	16	29	197	577
Haul seines				1	7	10				2	13	34
Beam trawls										1	7	20
Drag bag nets										3	18	45
Whaling apparatus	3	30	195									
Total [1]	5	44	243	1	7	10	3	14	29	158	1,095	3,842

Fishery	Kitsap County			Pierce County			San Juan County			Skagit County		
	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage
	Number	*Number*	*Net tons*	*Number*	*Number*	*Net tons*	*Number*	*Number*	*Net tons*	*Number*	*Number*	*Net tons*
Lines	9	53	111	6	29	81				4	109	921
Purse seines	20	128	300	30	227	681	1	5	10	7	57	170
Haul seines	5	33	77									
Beam trawls	2	12	34									
Drag bag nets	1	7	17									
Crab traps										1	8	25
Total [1]	22	138	317	36	256	762	1	5	10	11	166	1,091

[1] Exclusive of duplication.

Vessels engaged in the fisheries of Washington in 1923, by apparatus and persons—Continued

Fishery	Snohomish County			Whatcom County			Total		
	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage
	Number	*Number*	*Net tons*	*Number*	*Number*	*Net tons*	*Number*	*Number*	*Net tons*
Lines							155	1,121	4,461
Purse seines	12	89	256	18	131	420	121	863	2,488
Haul seines				3	21	69	11	74	190
Beam trawls							3	19	54
Drag bag nets							4	25	62
Whaling apparatus							3	30	195
Crab traps	2	14	25	1	8	18	4	30	68
Total [1]	12	89	256	18	131	420	267	1,945	6,980

Boats (by apparatus) and persons engaged in the shore fisheries of Washington in 1923, by counties

Boats, by apparatus	Astoria	Benton	Clallam	Clarke	Cowlitz	Garfield	Grant	Grays Harbor	Island
Gill nets, drift: Gas			1	43	53			62	
Gill nets, set:									
Gas			3	7	21			57	
Row								57	
Haul seines: Gas	3		1	3		1	1		10
Pound nets: Gas					11			17	1
Lines: Gas		1	139	3	1			28	74
Drag bag nets: Gas			1	1	4				5
Dip bag nets: Gas				2	45				
Beam trawl: Gas									1
Ring nets: Gas								8	
Crab traps: Gas			4						3
Total: [1]									
Gas	3	1	147	57	134	1	1	169	88
Row, sink floats, and scows								57	
Persons engaged	8	1	243	85	140	2	4	684	148

Boats, by apparatus	Jefferson	Kitsap	King	Klickitat	Mason	Okanogan	Pacific	Pierce	San Juan
Gill nets, drift: Gas		2	15	2			83	5	1
Gill nets, set:									
Gas		1	2	4			17		
Row							6		
Haul seines:									
Gas	2	20	7		6		5	4	
Row							4		
Pound nets: Gas	1		8	5			59		3
Lines: Gas	27	48	102	5	1	1	64	35	36
Drag bag nets: Gas		1			1		1		
Dip bag nets: Gas		7			3				1
Reef nets: Gas									5
Beam trawl: Gas		4	7		1			2	
Fish wheels: Gas				2			1		
Brush wier: Gas			1						
Ring nets: Gas		1	8				19		
Crab traps: Gas	1						13	1	
Clam hoes, shovels, and forks: Gas		6	1					2	
Oyster forks, rakes, and baskets:									
Gas					3				
Row, sink floats, and scows					42				
Total: [1]									
Gas	31	86	129	15	15	1	246	48	45
Row, sink floats, and scows					42		10		
Persons engaged	81	179	222	21	42	1	534	79	69

[1] Exclusive of duplication.

Boats (by apparatus) and persons engaged in the shore fisheries of Washington in 1923, by counties—Continued

Boats, by apparatus	Skagit	Skamania	Snohomish	Thurston	Wahkiakum	Walla Walla	Whatcom	Whitman	Total
Gill nets, drift: Gas	85	1	12	------	162	------	------	------	527
Gill nets, set:									
Gas	1	6	------	------	7	------	1	------	127
Row	------	2	------	------	------	------	------	------	65
Haul seines:									
Gas	6	1	8	7	4	------	2	3	94
Row	------	------	------	------	2	------	------	------	6
Pound nets: Gas	13	2	------	------	21	------	35	------	176
Lines: Gas	45	2	45	6	2	3	30	------	698
Drag bag nets: Gas	3	------	1	------	------	------	------	------	18
Dip bag nets: Gas	1	------	2	5	------	------	1	------	67
Reef nets: Gas	------	------	------	------	------	------	------	------	5
Beam trawl: Gas	1	------	1	1	------	------	------	------	18
Fish wheels: Gas	------	------	------	------	------	------	------	------	3
Brush wier: Gas	------	------	------	------	------	------	1	------	2
Ring nets: Gas	------	------	------	------	------	------	------	------	36
Crab traps: Gas	25	------	10	------	------	------	8	------	65
Clam hoes, shovels, and forks: Gas	------	------	------	------	------	------	------	------	9
Oyster forks, rakes, and baskets:									
Gas	2	------	------	14	------	------	------	------	19
Row, sink floats, and scows	8	------	------	168	------	------	------	------	218
Total:[1]									
Gas	146	12	75	31	184	3	80	3	1,751
Row, sink floats, and scows	8	2	------	168	2	------	------	------	289
Persons engaged	217	17	90	113	293	3	172	6	3,454

[1] Exclusive of duplication.

Yield of the fisheries of Washington in 1923, by counties and species

Species	Asotin		Benton		Clallam		Clarke	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp	------	------	------	------	------	------	190,080	$5,702
Cod, fresh	------	------	------	------	463	$14	------	------
Dolly Varden trout	------	------	------	------	38	1	------	------
Halibut	------	------	------	------	500,220	62,535	------	------
"Lingcod"	------	------	------	------	62	1	------	------
Salmon:								
Blueback or sockeye	4,000	$540	------	------	------	------	84,324	11,385
Chinook	8,609	1,205	------	------	651,498	66,638	307,636	43,198
Chum	------	------	------	------	4,602	116	13,841	139
Silver	------	------	------	------	765,901	34,225	61,436	3,073
Shad	------	------	------	------	------	------	31,414	471
Smelt	------	------	------	------	6,802	544	9,700	97
Steelhead trout	19,592	1,371	------	------	2,080	187	58,484	4,095
Sturgeon	218	17	330	$26	------	------	8,682	694
Crabs	------	------	------	------	57,134	2,857	------	------
Octopus	------	------	------	------	42,064	1,262	------	------
Total	32,419	3,133	330	26	2,030,864	168,380	765,597	68,854

Species	Cowlitz		Garfield		Grant		Grays Harbor	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp	------	------	------	------	193,625	$5,809	------	------
Salmon:								
Blueback or sockeye	225,009	$30,376	1,596	$215	------	------	15,249	$2,110
Chinook	435,622	60,847	360	32	------	------	1,148,761	58,632
Chum	148,823	1,489	------	------	------	------	1,527,843	23,852
Humpback	------	------	------	------	------	------	1,138,693	79,188
Silver	172,910	8,648	2,880	144	------	------	1,237,488	37,399
Shad	5,385	81	------	------	------	------	189	3
Smelt	901,495	9,014	------	------	------	------	------	------
Steelhead trout	144,345	10,105	------	------	------	------	6,499	608
Sturgeon	7,206	574	------	------	------	------	7,727	605
Crabs	------	------	------	------	------	------	64,724	3,136
Clams, razor	------	------	------	------	------	------	639,138	28,762
Sperm oil	------	------	------	------	------	------	347,250	18,500
Whale oil	------	------	------	------	------	------	1,375,500	91,500
Other whale products	------	------	------	------	------	------	744,000	18,510
Total	2,040,795	121,134	4,836	391	193,625	5,809	8,253,061	362,805

Yield of the fisheries of Washington in 1923, by counties and species—Continued

Species	Island		Jefferson		King		Kitsap	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Catfish					1,230	$62		
Cod, fresh	918	$27			156,434	6,993	2,747	$71
Cod, salted					1,356,711	67,836		
Dolly Varden trout	16	1					15	1
Flounders	6,097	124			48,595	976	18,174	537
Grayfish	53,400	70			6,000	15		
Halibut	48	7	1,000	$123	22,311,314	2,942,670	210,139	31,062
Herring	4,961	50			176,668	1,767	108,930	1,089
"Lingcod"	430	9			212,166	5,072	1,795	36
Mackerel	20	1						
Perch	6,360	254			9,406	419	14,704	621
Rockfish	7,584	153			166,682	4,094	6,721	135
Sablefish					2,174,980	109,364	4,500	360
Salmon:								
Blueback or sockeye	822	116	19,348	2,755	232,755	32,686	112,760	15,811
Chinook	328,286	33,590	188,374	19,363	1,771,774	167,290	371,054	37,292
Chum	18,344	440	23,762	573	2,052,148	47,097	700,160	17,199
Humpback	85,590	2,682	251,720	8,390	9,805,955	155,872	1,997,868	63,344
Silver	279,804	12,725	207,133	9,770	2,654,261	89,955	731,014	26,867
Sea bass, white, or squeteague	161	4			6	1		
Shad					69	3		
Skates	295	3			5,240	52	145	3
Smelt	55,933	2,722	3,565	285	1,495	120	49,156	3,858
Sole	4,524	136			44,583	1,377	49,563	1,487
Steelhead trout			48	4	28,328	2,547	64	6
Sturgeon					1,920	185	1,165	105
Tomcod							510	10
Crabs	35,420	1,769	1,386	69	62,942	3,147	9,658	483
Shrimp							13,142	1,708
Clams, hard	18,860	407	65,935	1,318	30,230	1,209	404,100	11,221
Clams, razor			54,425	2,449				
Octopus	189	6	3,890	117	1,781	53	1,589	48
Total	908,062	55,296	820,636	45,216	43,313,673	3,640,862	4,809,673	213,354

Species	Klickitat		Mason		Okanogan		Pacific	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod, fresh			46	$1				
Flounders			115	2				
"Lingcod"			16	1				
Perch			16,810	672			550	$22
Rockfish			941	19				
Salmon:								
Blueback or sockeye	2,937	$406					231,572	31,262
Chinook	27,250	3,097	4,167	427			2,001,173	267,419
Chum	12,919	130					259,099	4,674
Silver	203,328	8,000	4,166	198			1,107,557	52,749
Shad							43,238	1,977
Smelt			25,420	2,017				
Sole			1,240	37				
Steelhead trout	161,005	12,508					454,424	31,815
Sturgeon	7,102	572			720	$58	22,019	1,762
Crabs							213,158	10,648
Shrimp			2,880	374				
Clams, hard			11,569	463				
Clams, razor							287,686	12,945
Oysters			300,000	28,000				
Total	414,541	24,713	367,370	32,211	720	58	4,620,476	415,273

Species	Pierce		San Juan		Skagit		Skamania	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod, fresh	630	$19	44	$1	1,360	$41		
Cod, salted					2,324,000	116,200		
Flounders	748	15			437	9		
Halibut	1,118,210	145,767	1,200	190	8,492	1,347		
Herring					6,030	60		
"Lingcod"	1,296	26	3,913	78	2,571	51		
Perch	4,091	163						
Rockfish	295	6	9,137	183	1,159	24		
Sablefish	47,000	2,350						
Salmon:								
Blueback or sockeye	310,704	43,438	59,976	8,516	412,350	59,036	9,362	$1,263
Chinook	221,256	22,379	217,226	21,518	1,612,271	146,869	29,723	4,161
Chum	1,336,679	32,203	54,517	1,348	587,690	14,522	12,072	121
Humpback	4,766,248	150,183	258,505	8,616	3,358,766	117,851		
Silver	1,043,282	33,445	312,641	12,148	1,258,753	40,336	14,393	719
Sea bass, white, or squeteague	88	2			277	6		
Shad					220	11	233	3
Skates	500	5			30	1		

Yield of the fisheries of Washington in 1923, by counties and species—Continued

Species	Pierce		San Juan		Skagit		Skamania	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Smelt	13,857	$1,075	579	$46	8,717	$698		
Sole	18,300	549			1,650	50		
Steelhead trout	181	14	16	1	22,184	1,995	32,192	$2,253
Sturgeon					4,145	373	4,813	386
Tomcod	274	3						
Crabs	594	30			366,630	18,332		
Shrimp	2,457	319			13,054	1,697		
Clams, hard	57,240	2,290			7,251	290		
Oysters					99,960	5,000		
Octopus	1,250	38	200	6	1,206	37		
Total	8,945,180	434,319	917,954	52,651	10,099,203	524,836	102,788	8,906

Species	Snohomish		Thurston		Wahkiakum		Walla Walla	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders	121,314	$2,427	120	$2				
Herring	200	2						
"Lingcod"	594	13						
Perch	1,822	73						
Rockfish	401	9						
Salmon:								
Blueback or sockeye	95,532	14,245			127,652	$17,324		
Chinook	260,863	25,858	37,503	3,843	1,281,404	179,407		
Chum	612,164	15,322			257,681	2,576		
Humpback	1,694,175	53,508						
Silver	598,088	21,079	37,494	1,781	434,509	21,724	198	$10
Shad					8,019	161		
Skates	1,000	10						
Smelt	4,302	344	87,394	6,992				
Sole	44	1						
Steelhead trout	54	5			451,633	31,612		
Sturgeon					17,380	1,391	475	38
Crabs	77,616	3,881						
Shrimp			3,124	406				
Clams, hard	400	16						
Clams, razor					2,651	119		
Oysters			2,340,000	234,000				
Octopus	208	6						
Total	3,468,777	136,799	2,505,635	247,024	2,580,929	254,314	673	48

Species	Whatcom		Whitman		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp					383,705	$11,511
Catfish					1,230	62
Cod, fresh					162,642	7,167
Cod, salted					3,680,711	184,036
Dolly Varden trout					69	3
Flounders					195,600	4,092
Grayfish					59,400	85
Halibut	751	$119			24,151,374	3,183,820
Herring	128,600	1,286			425,389	4,254
"Lingcod"	245	5			223,088	5,292
Mackerel					20	1
Perch					53,743	2,224
Rockfish	77	2			192,997	4,625
Sablefish					2,226,480	112,074
Salmon:						
Blueback or sockeye	1,717,497	242,708	750	$65	3,664,245	514,257
Chinook	2,307,450	210,416	5,164	723	13,217,424	1,374,204
Chum	1,168,741	28,357			8,791,085	190,158
Humpback	9,739,420	320,956			33,096,940	960,590
Silver	1,821,023	58,158	2,100	105	12,950,359	473,258
Sea bass, white, or squeteague					532	13
Shad					88,767	2,710
Skates					7,210	74
Smelt	10,136	811			1,178,551	28,623
Sole					119,904	3,637
Steelhead trout	19,344	1,741	500	35	1,400,973	100,902
Sturgeon			155	12	84,057	6,798
Tomcod					784	13
Crabs	256,278	10,032			1,145,540	54,384
Shrimp					34,657	4,504
Clams, hard	3,100	62			598,685	17,276
Clams, razor					983,900	44,275
Oysters					2,739,960	267,000
Sperm oil					347,250	18,500
Whale oil					1,375,500	91,500
Other whale products					744,000	18,510
Octopus					52,377	1,573
Total	17,172,662	874,653	8,669	940	114,379,148	7,692,005

Yield of the vessel fisheries of Washington in 1923, by counties and species

Species	Grays Harbor		Island		Jefferson		King	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod, fresh							149,284	$6,778
Cod, salted							1,356,711	67,836
Flounders							357	11
Halibut					1,000	$123	22,311,314	2,942,670
Herring			4,200	$42			74,820	749
"Lingcod"							207,524	4,979
Perch							6,247	293
Rockfish							164,662	4,054
Sablefish							2,174,980	109,364
Salmon:								
Blueback or sockeye	8,904	$1,253	822	116			195,000	27,325
Chinook	2,360	212	1,980	177	11,400	1,227	20,470	1,864
Chum	97,468	2,069	18,170	436	22,934	552	1,539,695	34,286
Humpback	309,660	10,109	85,510	2,679			3,100,805	99,039
Silver	49,960	1,266	21,856	629	4,200	126	843,849	24,560
Skate							105	1
Smelt							1,495	120
Sole							4,145	164
Steelhead trout							256	21
Sturgeon							380	46
Sperm oil	347,250	18,500						
Whale oil	1,375,500	91,500						
Other whale products	744,000	18,510						
Total	2,935,102	143,419	132,538	4,079	39,534	2,028	32,152,099	3,324,160

Species	Kitsap		Pierce		San Juan		Skagit	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod, fresh	1,200	$24						
Cod, salted							2,324,000	$116,200
Flounders	96	2						
Halibut	210,139	31,062	1,118,210	$145,767				
Herring	44,200	442						
"Lingcod"	1,675	34	1,000	20				
Perch	1,420	57						
Rockfish	949	19						
Sablefish	4,500	360	47,000	2,350				
Salmon:								
Blueback or sockeye	110,006	15,420	310,152	43,360			19,950	2,795
Chinook	56,868	5,118	20,860	1,849			1,989	177
Chum	700,160	17,199	1,336,374	32,195	31,414	$770	320,285	7,784
Humpback	1,992,623	63,169	4,764,068	150,110			430,291	13,896
Silver	396,780	11,417	838,616	23,805	2,400	69	126,960	3,689
Smelt	2,644	212						
Sole	34,327	1,030					190	6
Steelhead trout	64	6	181	14			96	7
Crabs							12,760	638
Shrimp	7,063	918						
Total	3,564,714	146,489	8,436,461	399,470	33,814	839	3,236,521	145,192

Species	Snohomish		Whatcom		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod, fresh					150,484	$6,802
Cod, salted					3,680,711	184,036
Flounders					453	13
Halibut					23,640,663	3,119,622
Herring			49,600	$496	172,820	1,729
"Lingcod"					210,199	5,033
Perch					7,667	350
Rockfish					165,611	4,073
Sablefish					2,226,480	112,074
Salmon:						
Blueback or sockeye	87,852	$13,354	100,978	13,162	833,664	116,785
Chinook	25,360	2,270	12,961	1,148	154,248	14,042
Chum	589,193	14,748	844,608	20,254	5,500,301	130,293
Humpback	1,690,430	53,383	1,831,745	57,367	14,205,132	449,752
Silver	326,616	9,434	201,593	5,819	2,812,830	80,814
Skate	1,000	10			1,105	11
Smelt			8,541	683	12,680	1,015
Sole					38,662	1,200
Steelhead trout	54	5	104	9	755	62
Sturgeon					380	46
Crabs	17,578	879	4,620	231	34,958	1,748
Shrimp					7,063	918
Sperm oil					347,250	18,500
Whale oil					1,375,500	91,500
Other whale products					744,000	18,510
Total	2,738,083	94,083	3,054,750	99,169	56,323,616	4,358,928

Yield of the shore fisheries of Washington in 1923, by counties and species

Species	Asotin		Benton		Clallam		Clarke	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp							190,080	$5,702
Cod					463	$14		
Dolly Varden trout					38	1		
Halibut					500,220	62,535		
"Lingcod"					62	1		
Salmon:								
Blueback or sockeye	4,000	$540					84,324	11,385
Chinook	8,609	1,205			651,498	66,638	307,636	43,198
Chum					4,602	116	13,841	139
Silver					765,901	34,225	61,436	3,073
Shad							31,414	471
Smelt					6,802	544	9,700	97
Steelhead trout	19,592	1,371			2,080	187	58,484	4,095
Sturgeon	218	17	330	$26			8,682	694
Crabs					57,134	2,857		
Octopus					42,064	1,262		
Total	32,419	3,133	330	26	2,030,864	168,380	765,597	68,854

Species	Cowlitz		Garfield		Grant		Grays Harbor	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp					193,625	$5,809		
Salmon:								
Blueback or sockeye	225,009	$30,376	1,596	$215			6,345	$857
Chinook	435,622	60,847	360	32			1,146,401	58,420
Chum	148,823	1,489					1,430,375	21,783
Humpback							829,033	69,079
Silver	172,910	8,648	2,880	144			1,187,528	36,133
Shad	5,385	81					189	3
Smelt	901,495	9,014						
Steelhead trout	144,345	10,105					6,499	608
Sturgeon	7,206	574					7,727	605
Crabs							64,724	3,136
Clams, razor							639,138	28,762
Total	2,040,795	121,134	4,836	391	193,625	5,809	5,317,959	219,386

Species	Island		Jefferson		King		Kitsap	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Catfish					1,230	$62		
Cod	918	$27			7,150	215	1,547	$47
Dolly Varden trout	16	1					15	1
Flounders	6,097	124			48,238	965	18,078	535
Grayfish	53,400	70			6,000	15		
Halibut	48	7						
Herring	761	8			101,848	1,018	64,730	647
"Lingcod"	430	9			4,642	93	120	2
Mackerel	20	1						
Perch	6,360	254			3,159	126	13,284	564
Rockfish	7,584	153			2,020	40	5,772	116
Salmon:								
Blueback or sockeye			19,398	$2,755	37,755	5,361	2,754	391
Chinook	326,306	33,413	176,974	18,136	1,751,304	165,426	314,186	32,174
Chum	174	4	828	21	512,453	12,811		
Humpback	80	3	251,720	8,390	6,705,150	56,833	5,245	175
Silver	257,948	12,096	202,933	9,644	1,810,412	65,395	334,234	15,450
Sea bass, white or squeteague	161	4			6	1		
Shad					69	3		
Skate	295	3			5,135	51	145	3
Smelt	55,933	2,722	3,565	285			46,512	3,646
Sole	4,524	136			40,438	1,213	15,236	457
Steelhead trout			48	4	28,072	2,526		
Sturgeon					1,540	139	1,165	105
Tomcod							510	10
Crabs	35,420	1,769	1,386	69	62,942	3,147	9,658	483
Shrimp							6,079	790
Clams, hard	18,860	407	65,935	1,318	30,230	1,209	404,100	11,221
Clams, razor			54,425	2,449				
Octopus	189	6	3,890	117	1,781	53	1,589	48
Total	775,524	51,217	781,102	43,188	11,161,574	316,702	1,244,959	66,865

Yield of the shore fisheries of Washington in 1923, by counties and species—Contd.

Species	Klickitat		Mason		Okanogan		Pacific	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod			46	$1				
Flounders			115	2				
"Lingcod"			16	1				
Perch			16,810	672			550	$22
Rockfish			941	19				
Salmon:								
Blueback or sockeye	2,937	$406					231,572	31,262
Chinook	27,250	3,097	4,167	427			2,001,173	267,419
Chum	12,919	130					259,099	4,674
Silver	203,328	8,000	4,166	198			1,107,557	52,749
Shad							43,238	1,977
Smelt			25,420	2,017				
Sole			1,240	37				
Steelhead trout	161,005	12,508					454,424	31,815
Sturgeon	7,102	572			720	$58	22,019	1,762
Crabs							213,158	10,648
Shrimp			2,880	374				
Clams, hard			11,569	463				
Clams, razor							287,686	12,945
Oysters			300,000	28,000				
Total	414,541	24,713	367,370	32,211	720	58	4,620,476	415,273

Species	Pierce		San Juan		Skagit		Skamania	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Cod	630	$19	44	$1	1,360	$41		
Flounders	748	15			437	9		
Halibut			1,200	190	8,492	1,347		
Herring					6,030	60		
"Lingcod"	295	6	3,913	78	2,571	51		
Perch	4,091	163						
Rockfish	295	6	9,137	183	1,159	24		
Salmon:								
Blueback or sockeye	552	78	59,976	8,516	392,400	56,241	9,362	$1,263
Chinook	200,396	20,530	217,226	21,518	1,610,282	146,692	29,723	4,161
Chum	305	8	23,103	578	267,405	6,738	12,072	121
Humpback	2,180	73	258,505	8,616	2,928,475	103,955		
Silver	204,666	9,640	310,241	12,079	1,131,793	36,647	14,393	719
Sea bass, white, or squeteague	88	2			277	6		
Shad					220	11	233	3
Skate	500	5			30	1		
Smelt	13,857	1,075	579	46	8,717	698		
Sole	18,300	549			1,460	44		
Steelhead trout			16	1	22,088	1,988	32,192	2,253
Sturgeon					4,145	373	4,813	386
Tomcod	274	3						
Crabs	594	30			353,870	17,694		
Shrimp	2,457	319			13,054	1,697		
Clams, hard	57,240	2,290			7,251	290		
Oysters					99,960	5,000		
Octopus	1,250	38	200	6	1,206	37		
Total	508,719	34,849	884,140	51,812	6,862,682	379,644	102,788	8,906

Species	Snohomish		Thurston		Wahkiakum		Walla Walla	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders	121,314	$2,427	120	$2				
Herring	200	2						
"Lingcod"	594	13						
Perch	1,822	73						
Rockfish	401	9						
Salmon:								
Blueback or sockeye	7,680	891			127,652	$17,324		
Chinook	235,503	23,588	37,503	3,843	1,281,404	179,407		
Chum	22,971	574			257,681	2,576		
Humpback	3,745	125						
Silver	271,472	11,645	37,494	1,781	434,509	21,724	198	$10
Shad					8,019	161		
Smelt	4,302	344	87,394	6,992				
Sole	44	1						
Steelhead trout					451,633	31,612		
Sturgeon					17,380	1,391	475	38
Crabs	60,038	3,002						
Shrimp			3,124	406				
Clams, hard	400	16						
Clams, razor					2,651	119		
Oysters			2,340,000	234,000				
Octopus	208	6						
Total	730,694	42,716	2,505,635	247,024	2,580,929	254,314	673	48

Yield of the shore fisheries of Washington in 1923, by counties and species—Contd.

Species	Whatcom		Whitman		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp					383,705	$11,511
Catfish					1,230	62
Cod					12,158	365
Dolly Varden trout					69	3
Flounders					195,147	4,079
Grayfish					59,400	85
Halibut	751	$119			510,711	64,198
Herring	79,000	790			252,569	2,525
"Lingcod"	245	5			12,889	259
Mackerel					20	1
Perch					46,076	1,874
Rockfish	77	2			27,386	552
Salmon:						
Blueback or sockeye	1,616,519	229,546	750	$65	2,830,581	397,472
Chinook	2,294,489	209,268	5,164	723	13,063,176	1,360,162
Chum	324,133	8,103			3,290,784	59,865
Humpback	7,907,675	263,589			18,891,808	510,838
Silver	1,619,430	52,339	2,100	105	10,137,529	392,444
Sea bass, white, or squeteague					532	13
Shad					88,767	2,710
Skate					6,105	63
Smelt	1,595	128			1,165,871	27,608
Sole					81,242	2,437
Steelhead trout	19,240	1,732	500	35	1,400,218	100,840
Sturgeon			155	12	83,677	6,752
Tomcod					784	13
Crabs	251,658	9,801			1,110,582	52,636
Shrimp					27,594	3,586
Clams, hard	3,100	62			598,685	17,276
Clams, razor					983,900	44,275
Oysters					2,739,960	267,000
Octopus					52,377	1,573
Total	14,117,912	775,484	8,669	940	58,055,532	3,333,077

OREGON

The fisheries of Oregon in 1923 employed 4,230 fishermen, 3 vessels, 2,042 power boats, 218 rowboats, and yielded 32,982,678 pounds of fish valued at $3,500,171, of which 161,659 pounds, valued at $9,293, consisting of halibut and salmon, were caught by 3 vessels sailing from Clatsop County. These vessels had a total net tonnage of 44 and carried a total of 15 fishermen. Two of them operated lines and one was a purse seiner.

The following tables give the number of boats using each kind of fishing apparatus, by counties, the number of fishermen by counties, and the total catch of the fisheries of Oregon by species and counties:

Boats (by apparatus) and persons engaged in the shore fisheries of Oregon in 1923, by counties

Boats, by apparatus	Clackmas	Clatsop	Columbia	Coos	Curry	Douglas	Hood River
Gill nets, drift, gas	32	694	258	48	64	106	5
Gill nets, set:							
Gas	9	19	5	29	4	39	3
Row	10	16	12	23	2	62	4
Haul seines:							
Gas		11	4	3	2		
Row		7	2	3	2		
Pound nets, gas		15					1
Lines, gas		50	5	2		5	
Drag bag nets, gas			5				
Ring nets, gas		22		14		33	
Total:[1]							
Gas	33	790	265	83	69	151	8
Row	10	23	14	24	3	62	4
Persons engaged	75	1,653	529	166	140	345	19

[1] Exclusive of duplication.

Boats (by apparatus) and persons engaged in the shore fisheries of Oregon in 1923, by counties—Continued

Boats, by apparatus	Jackson	Josephine	Lane	Lincoln	Multnomah	Tillamook	Wasco	Total
Gill nets, drift, gas	2	16	22	67	143	140	11	1,608
Gill nets, set:								
Gas			27	81	18	129	1	364
Row			15	12	14	31		201
Haul seines:								
Gas					3		1	24
Row					3		1	18
Pound nets, gas					3			19
Lines, gas			2	2	6			72
Drag bag nets, gas								5
Fish wheels, gas					1			1
Ring nets, gas			4	71		32		176
Tongs and dredges, scows [1]				15				15
Total: [2]								
Gas	2	16	42	175	166	230	12	2,042
Row			15	27	19	31	1	233
Persons engaged	4	32	90	301	373	473	30	4,230

[1] Exclusive of duplication.
[2] In addition to the above there were 30 men and 30 gas boats fishing crab traps on the Molalla, Columbia, Willamette, and Yamhill Rivers, which could not be divided by counties.

Yield of the fisheries of Oregon in 1923 by counties and species

Species	Clackamas		Clatsop		Columbia		Coos	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Halibut			369,600	$56,926			70,653	$11,304
Herring			15,625	313				
"Lingcod"			66,428	1,993				
Rockfishes			26,046	781			31,256	938
Salmon:								
Chinook	627,948	$87,913	8,160,331	1,142,445	2,421,169	$338,972	444,008	62,162
Chum			281,342	3,381	127,983	1,279	15,704	157
Humpback			50,105	1,570				
Silver	48,068	2,403	1,083,832	53,787	71,484	3,574	422,464	21,123
Sockeye	352	48	514,862	69,512	629,350	84,962		
Shad	168	3	45,097	679	171,285	2,570	3,114	46
Smelt					27,195	271		
Steelhead trout	13,451	942	825,561	57,926	308,959	21,626	166,642	11,664
Sturgeon	324	25	60,709	4,856	18,966	1,517	918	73
Tomcod			5,000	400				
Crabs			5,368	698			20,592	2,677
Clams, razor			137,305	6,180				
Clams, soft							7,249	327
Octopus					71	4		
Total	690,311	91,334	11,647,211	1,401,447	3,776,462	454,775	1,182,600	110,471

Species	Curry		Douglas		Hood River		Josephine	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Salmon:								
Chinook	1,120,753	$156,905	427,899	$59,907	26,216	$3,670	100,146	$14,020
Chum			40,476	405	9,525	95		
Silver	14,100	705	1,318,540	65,927	6,394	320		
Sockeye					5,274	712		
Shad			148,038	2,221	376	6		
Steelhead trout	42,452	2,971	202,949	14,206	16,476	1,153		
Sturgeon			8,164	653	628	50		
Crabs			98,396	12,791				
Clams, soft			300	14				
Total	1,177,305	160,581	2,244,762	156,124	64,889	6,006	100,146	14,020

Yield of the fisheries of Oregon in 1923 by counties and species—Continued

Species	Jackson		Lane		Lincoln		Multnomah	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders					5,000	$150		
Halibut					176,630	28,261	247,283	$39,565
Herring					78,125	1,563		
"Lingcod"					11,072	332		
Perch					15,000	750		
Rockfishes							5,208	156
Sablefish							250,000	12,500
Salmon:								
Chinook	23,594	$3,303	105,820	$14,824	646,982	90,578	1,950,744	273,103
Chum			7,884	79	98,392	985	16,849	169
Silver			357,670	17,884	1,133,418	56,671	359,876	17,993
Sockeye							844,436	114,051
Shad	82	1	5,354	81	430	6	29,253	439
Shad roe							662	20
Smelt							250,000	2,500
Steelhead trout	4,492	314	35,864	2,510	204,560	14,479	618,594	43,302
Sturgeon	994	80			134	11	29,763	2,381
Crabs			7,992	1,039	168,354	21,886		
Clams, soft							3,967	179
Oysters, native, private					19,200	16,800		
Total	29,162	3,698	520,584	36,417	2,557,297	232,472	4,606,635	506,358

Species	Tillamook		Wasco		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Flounders					5,000	$150
Halibut					864,166	136,056
Herring					93,750	1,876
"Lingcod"					77,500	2,325
Perch					15,000	750
Rockfishes					62,510	1,875
Sablefish					250,000	12,500
Salmon:						
Chinook	957,132	$134,000	348,156	$48,742	17,360,898	2,430,544
Chum	488,008	5,006			1,086,163	11,556
Humpback					50,105	1,570
Silver	1,793,284	89,666	107,532	5,377	6,716,662	335,430
Sockeye	9,188	1,240	61,569	8,312	2,065,031	278,837
Shad					403,197	6,052
Shad roe					662	20
Smelt					277,195	2,771
Steelhead trout	258,846	18,119	156,697	10,969	2,855,543	200,181
Sturgeon			3,521	282	124,121	9,928
Tomcod					5,000	400
Crabs	58,581	8,646			359,283	47,737
Clams, razor					137,305	6,180
Clams, soft	20,200	909			31,716	1,429
Oysters, native, private					19,200	16,800
Octopus					11	4
Total	3,585,239	257,586	677,475	73,682	[1] 32,860,078	[1] 3,504,971

[1] In addition to the above there were caught in the Molalla, Willamette, Columbia, and Yamhill Rivers 141,800 pounds of crawfish, valued at $12,000, bringing the grand total to 33,001,878 pounds, valued at $3,516,971.

CALIFORNIA

The fisheries of California in 1923 employed 4,594 fishermen, 285 vessels, 1,306 power boats, and 135 sail and row boats, and yielded 262,523,771 pounds of fishery products, valued at $7,722,800. This includes the fisheries prosecuted by California fishermen in waters off the coast of Mexico, the total yield of which amounted to 23,954,007 pounds, valued at $1,479,447, in 1923.

The vessel fishery of California employed 1,972 fishermen, sailing on 285 vessels, all of which were gas vessels excepting 11 sailing from San Francisco. Of these 5 were steamers in the paranzella fishery, 2 were schooners in the hand-line fishery, and 4 were steamers engaged in whaling.

The following tables give the number, crew, and tonnage of vessels using each kind of fishing apparatus, by counties; the number of boats using each kind of fishing apparatus, by counties; the number of persons in the shore or boat fisheries, by counties; the total yield of the fisheries of California, by species and counties; and the yield of the fisheries prosecuted by California fishermen in waters off the coast of Mexico, by species and landing ports.

Vessels engaged in the fisheries of California in 1923

Fishery	Los Angeles County			San Diego County			San Francisco County			Total		
	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage	Vessels	Crew	Tonnage
	Number	*Number*	*Net tons*	*Number*	*Number*	*Net tons*	*Number*	*Number*	*Net tons*	*Number*	*Number*	*Net tons*
Lines	89	844	691	67	288	527	3	61	737	159	1,193	1,954
Lampara nets	125	1,078	1,012	6	28	42	------	------	------	131	1,106	1,054
Purse seines	43	351	1,039	3	18	54	------	------	------	46	369	1,093
Trammel nets	13	53	94	10	38	74	------	------	------	23	91	168
Paranzella nets	1	8	24	------	------	------	11	44	254	12	52	278
Gill nets	4	17	25	10	38	74	------	------	------	14	55	99
Lobster traps	------	------	------	2	10	24	------	------	------	2	10	24
Abalone outfit	------	------	------	------	------	------	1	5	8	1	5	8
Whaling apparatus	------	------	------	------	------	------	4	44	235	4	44	235
Total [1]	191	1,490	2,213	75	328	624	19	154	1,234	285	1,972	4,071

Exclusive of duplication.

Boats (by apparatus) and persons engaged in the shore fisheries of California in 1923, by counties

Boats, by apparatus	Del Norte and Humboldt	Mendocino, Sonoma, and Lake	Marin	Solano and Yolo	Coluso, Glenn, and Sutter	Sacramento and San Joaquin	Alameda and Contra Costa	San Francisco and San Mateo
Lines:								
Gas	41	75	29	------	------	3	3	178
Sail and row	2	1	------	------	1	1	2	------
Gill nets:								
Gas	4	4	6	71	2	41	78	47
Sail and row	88	------	3	1	4	3	7	------
Lampara nets: Gas	------	------	------	------	------	------	------	1
Trammel nets: Gas	------	------	1	------	------	------	------	------
Bag nets: Gas	------	------	------	------	------	------	------	10
Paranzella nets: Gas	------	------	------	------	------	------	------	1
Fyke nets:								
Gas	------	------	------	1	------	2	------	1
Row	------	------	------	1	2	2	------	------
Haul seines:								
Gas	2	1	------	------	------	------	1	1
Row	------	------	1	------	3	------	------	------
Lobster traps: Gas	------	------	------	------	------	------	------	1
Crab nets:								
Gas	11	6	22	------	------	3	1	105
Row	1	------	------	------	------	------	------	------
Abalone outfit: Gas	------	------	------	------	------	1	------	------
Other gear: Gas	------	------	2	------	------	------	------	2
Total: [1]								
Gas	45	80	37	71	2	43	84	207
Sail and row	91	1	4	2	9	8	8	------
Persons engaged	253	90	50	134	16	81	171	326

[1] Exclusive of duplication.

Boats (by apparatus) and persons engaged in the shore fisheries of California in 1923, by counties—Continued

Boats, by apparatus	Santa Cruz	Monterey	San Louis Obispo, Santa Barbara, and Ventura	Los Angeles	Orange	San Diego	Total
Lines:							
Gas	27	182	18	376	29	104	1,065
Sail and row				8	1		16
Gill nets:							
Gas	10	5	5	26	2	27	328
Sail and row			3	1			110
Lampara nets: Gas		28	1	64	1	5	100
Trammel nets:							
Gas			2	21	3	13	40
Row			1				1
Bag nets: Gas							10
Paranzella nets: Gas		1	6	1			9
Fyke nets:							
Gas							4
Row							5
Haul seines:							
Gas			1	1			7
Row							4
Lobster traps: Gas		1	1	5	4	5	17
Crab nets:							
Gas	2	1					151
Row							1
Abalone outfit: Gas		6					7
Other gear: Gas				1			5
Total:[1]							
Gas	18	192	27	363	32	106	1,307
Sail and row			2	9	1		135
Persons engaged	30	416	63	724	47	224	2,625

[1] Exclusive of duplication.

Yield of the fisheries of California in 1923, by counties

Species	Del Norte and Humboldt		Mendocino, Sonoma, and Lake		Marin		Solano and Yolo	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Carp			12,185	$244			3,257	$65
Catfish			50,884	9,159			823	148
Flounder	186,144	$26,124	8,351	1,253	1,649	$164	3,210	96
Herring	3,341	25			28,035	210		
"Lingcod"	13,122	656	6,562	328	332	17		
Perch	43,317	2,166			23,148	1,157	108	5
Pike, Sacramento							111	2
Rockfishes	5,864	293	1,609	80	3,037	152		
Salmon	1,990,235	179,121	812,867	73,158	31,129	2,802	475,812	42,823
Sea bass, white, or squeteague					6,020	548		
Shad							1,565	31
Shad, buck							47,266	945
Shad, roe							110,248	6,615
Smelt	32,166	322	2,765	28	42,104	421		
Sole	10,153	406			182	7		
Steelhead trout	3,011	422						
Striped bass					2,593	259	78,030	7,803
Tomcod					424	34		
Other fish	26,759	5,117	4,700	188	1,051	210	1,482	59
Crabs	254,640	35,140	6,480	894	16,776	2,315		
Shrimp					418,773	25,126		
Clams, cockle	5,538	609	20	2	23,145	2,546		
Clams, mixed	14,551	1,164			10,497	840		
Clams, soft			530	21	78,560	3,142		
Mussels					230	12		
Oysters, eastern, market					9,600	3,360		
Abalone					40	2		
Octopus					219	22		
Total	2,588,841	251,565	906,953	85,355	697,544	43,346	721,912	58,592

Yield of fisheries of California in 1923, by counties—Continued

Species	Tehama, Colusa, Glenn, Sutter, and Butte		Sacramento and San Joaquin		Alameda and Contra Costa		San Francisco and San Mateo	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Anchovies							184, 085	$15, 806
Barracuda							56	4
Bonito							574	25
Carp			65, 341	$1, 307	58, 163	$1, 163	9, 661	193
Catfish			51, 330	9, 239	26, 249	4. 725		
Cod, salted							1, 398, 000	69, 900
Flounder					12, 117	364	1, 658, 823	64, 269
Grayfish							152, 208	761
Hake							70, 232	702
Hardhead			9, 563	96				
Herring					66, 087	496	269, 785	2, 023
Kingfish							735	29
"Lingcod"							321, 542	16, 077
Mackerel							74	3
Perch					97	5	63, 287	3, 164
Pike, Sacramento			647	13	3, 772	75	94	2
Pilchard or sardines							339, 804	1, 359
Pompano							618	247
Rockfishes							566, 319	28, 225
Sablefish							198, 590	11, 915
Salmon	68, 964	$6, 207	477, 526	42, 977	1, 221, 643	109, 947	1, 283, 748	115, 537
Sea bass, white, or squeteague							16, 555	1, 507
Shad			4, 912	98	37, 099	742	28, 470	569
Shad, buck			23, 163	463	333, 331	6, 667	27	1
Shad, roe			38, 148	2, 289	661, 100	39, 666	5	1
Skates							127, 224	636
Smelt					82	1	109, 934	1, 099
Sole					270	11	6, 174, 114	246, 964
Splittail			13, 156	132	800	8		
Striped bass	119	12	141, 342	14, 134	581, 870	58, 187	105, 508	10, 551
Suckers			342	3				
Tomcod							37, 868	3, 029
Other fish			204	8	1, 332	53	83, 911	9, 854
Crabs					3, 552	490	786, 936	108, 597
Shrimp							694, 585	41, 675
Clams, soft					145, 231	5, 809	58, 774	2, 351
Mussels					477	24	9, 409	470
Octopus							9, 877	988
Terrapin			1, 128	68				
Sperm oil							15, 585	1, 282
Whale oil							4, 644, 293	316, 450
Other whale products							2, 370, 000	81, 796
Total	69, 083	6, 219	826, 802	70, 827	3, 153, 272	228, 433	21, 791, 310	1, 158, 061

Species	Santa Cruz		Monterey		San Luis Obispo, Santa Barbara, and Ventura		Los Angeles	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore			149	$18			8, 514, 349	$1, 106, 865
Anchovies			85, 016	638			37, 973	2, 848
Barracuda			6, 982	510	21, 693	$1, 584	5, 925, 768	507, 658
Bonito			3, 325	143	2, 288	98	1, 006, 531	43. 281
Flounder	185, 024	$7, 264	12, 720	922	333, 398	49, 995	877, 628	140, 673
Grayfish	1, 345	7					5, 645	28
Hake	8, 737	87						
Herring	188	1						
Kingfish	50, 848	2, 034	110, 207	4, 408	26	1	238, 722	3, 660
"Lingcod"	28, 693	1, 435	93, 677	4, 684				
Mackerel	944	38	570, 371	22, 815	13, 012	520	2, 688, 143	107, 864
Mullet							10, 805	1, 184
Perch	1, 884	94	22, 502	1, 125	980	49	164, 110	9, 846
Pilchard or sardines	275	1	86, 060, 322	344, 241	1, 060	4	67, 493, 419	337, 467
Pompano	187	75	106	42			20, 997	8, 453
Rock bass					2, 041	171	220, 395	18, 685
Rockfishes	559, 561	26, 217	1, 468, 475	66, 844	68, 408	3, 312	1, 343, 236	77, 910
Sablefish	329, 238	19, 754	10, 464	628				
Salmon	306, 336	27, 570	422, 000	37, 980				
Sculpin							44, 623	4, 462
Sea bass, black					2, 703	246	47, 398	4, 433
Sea bass, white, or squeteague	119, 368	2, 561	30, 187	655	149, 870	13, 638	1, 583, 470	146, 230

Yield of fisheries of California in 1923, by counties—Continued

Species	Santa Cruz		Monterey		San Luis Obispo, Santa Barbara, and Ventura		Los Angeles	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Shad	49	$1						
Sheepshead					289	$6	5,979	$120
Skates	2,507	13	990	$5			3,019	60
Skipjack or striped tuna							7,707,653	199,472
Smelt	62,210	622	7,140	71	69,200	692	339,261	14,735
Sole	642,785	25,711	54,275	2,171	73,842	3,692	114,077	6,845
Striped bass			111	11				
Swordfish							6,277	785
Tomcod	3,475	278						
Tuna, bluefin							1,901,334	95,897
Tuna, yellowfin							6,838,741	378,372
Tuna, mixed							662,355	35,470
Whitefish							27,066	1,390
Yellowtail					3,001	156	1,600,166	85,643
Other fish	14,019	561	6,332	392	13,470	539	85,099	3,440
Crabs	4,848	669	2,568	354				
Sea crawfish or spiny lobster					75,583	15,116	169,468	34,007
Clams, cockle							7,414	816
Clams, mixed							397	36
Clams, Pismo	720	50			237,228	16,606		
Mussels	50	3	4,665	233	95	5		
Abalone	15	1	1,532,757	58,245	22,322	848	32,599	1,271
Octopus	42,134	4,213	57,823	5,782			169	17
Squid			1,098,510	7,140			81,011	534
Terrapin							142	9
Total	2,365,440	119,260	91,661,674	560,057	1,090,509	107,278	109,805,439	3,380,466

Species	Orange		San Diego and Imperial		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore	754	$98	3,999,581	$520,212	12,514,833	$1,627,193
Anchovies					307,074	19,292
Barracuda	28,738	2,385	1,217,338	63,144	7,200,575	575,285
Bonito	28	1	102,501	3,762	1,115,247	47,310
Carp					148,607	2,972
Catfish					129,286	23,271
Cod, salted					1,398,000	69,900
Eels	18,061	542	188	6	18,249	548
Flounder	34,903	5,616	968,692	163,100	4,282,659	459,840
Grayfish			201,165	1,006	360,363	1,802
Hake					78,969	789
Hardhead					9,563	96
Herring			16,514	1,239	383,950	3,994
Kingfish			11,026	169	411,564	10,301
"Lingcod"			3,429	172	467,357	23,369
Mackerel	96,408	3,856	223,494	8,986	3,592,446	144,082
Mullet			63,420	6,881	74,225	8,065
Perch	959	58	39,290	2,013	359,682	19,682
Pike, Sacramento					4,624	92
Pilchard or sardines	775	3	5,301,351	21,205	159,197,006	704,280
Pompano	10	4	11,000	4,477	32,918	13,298
Rock bass	6,921	581	127,912	10,864	357,269	30,301
Rockfishes	52,824	3,063	880,911	44,218	4,950,244	250,314
Sablefish					538,292	32,297
Salmon					7,090,260	638,122
Sculpin	59	6	15,784	1,578	60,466	6,046
Sea bass, black	839	76	176,055	17,413	226,995	22,168
Sea bass, white, or squeteague	14,428	1,312	600,365	58,418	2,520,263	224,869
Shad					72,095	1,441
Shad, buck					403,787	8,076
Shad, roe					809,501	48,571
Sheepshead	76	2	25,284	511	31,628	639
Skates	188	2	60	1	133,988	717
Skipjack or striped tuna			3,754,869	98,613	11,462,522	298,085
Smelt	120,795	5,230	20,723	928	806,380	24,149
Sole	3,388	169	12,949	655	7,086,035	286,631
Splittail					13,956	140
Steelhead trout					3,011	422
Striped bass					909,573	90,957

Yield of fisheries of California in 1923, by counties—Continued

Species	Orange		San Diego and Imperial		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Suckers					342	$3
Swordfish			5,414	$683	11,691	1,468
Tomcod					41,767	3,341
Tuna, bluefin			1,399,753	69,988	3,301,087	165,885
Tuna, yellowfin			3,998,184	222,040	10,836,925	600,412
Tuna, mixed	15	$1			662,370	35,471
Whitefish	595	30	12,247	669	39,908	2,089
Yellowtail	2,748	143	2,373,696	131,108	3,979,611	217,050
Other fish	440	18	13,213	616	252,012	21,055
Crabs					1,075,800	148,459
Sea crawfish or spiny lobsters	25,206	5,041	822,601	171,492	1,092,858	225,656
Shrimp					1,113,358	66,801
Clams, cockle					36,117	3,973
Clams, mixed			400	36	25,845	2,076
Clams, Pismo					237,948	16,656
Clams, soft					283,095	11,323
Mussels	45,100	2,255			60,026	3,002
Oysters, eastern, market					9,600	3,360
Abalone					1,587,733	60,367
Octopus					110,222	11,022
Squid			925	6	1,180,446	7,680
Terrapin					1,270	77
Sperm oil					15,585	1,282
Whale oil					4,644,293	316,450
Other whale products					2,370,000	81,796
Total	454,258	30,492	26,400,334	1,626,209	262,533,371	7,726,160

Yield of the fisheries prosecuted by California fisherman in waters off the coast of Mexico

Species	Landed at San Pedro		Landed at San Diego		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Albacore			26,634	$3,729	26,634	$3,729
Barracuda	1,561,909	$145,458	502,842	36,708	2,064,751	182,166
Bonito	564,818	24,287	71,658	2,436	636,476	26,723
Flounders	70,924	11,348	811,389	139,536	882,313	150,884
Kingfish	7,822	196	307	8	8,129	204
"Lingcod"			47	3	47	3
Mackerel	33,826	1,691	4,669	233	38,495	1,924
Mullet	10,302	1,133	53,916	5,931	64,218	7,064
Perch	28,840	1,730	4,793	288	33,633	2,018
Pompano	5,456	2,237	7,682	3,150	13,138	5,387
Rock bass	17,238	1,620	11,992	1,127	29,230	2,747
Rockfishes	675	41	17,219	1,033	17,894	1,074
Sea bass, black	11,993	1,211	139,262	14,065	151,255	15,276
Sea bass, white, or squeteague	213,374	21,551	378,503	38,228	591,877	59,779
Sheepshead			517	16	517	16
Skipjack or striped tuna	4,531,884	135,957	2,351,561	70,547	6,883,445	206,504
Smelt	4,465	238	3,075	164	7,540	402
Sole	146	9	804	48	950	57
Swordfish			635	86	635	86
Tuna, bluefin	82,997	4,980			82,997	4,980
Tuna, yellowfin	6,515,754	363,579	3,892,275	217,189	10,408,029	580,768
Tuna, mixed	235,204	14,112			235,204	14,112
Whitefish	967	59	4,438	271	5,405	330
Yellowtail	243,523	15,098	767,492	47,585	1,011,015	62,683
Other fish	5,027	251	8,757	438	13,784	689
Spiny lobster	11,300	2,373	697,177	146,407	708,477	148,780
Clams, mixed	397	36	400	36	797	72
Abalone	32,599	945			32,599	945
Squid	4,381	36			4,381	36
Terrapin	142	9			142	9
Total	14,195,963	750,185	9,758,044	729,262	23,954,007	1,479,447

FISHERIES OF THE SOUTH ATLANTIC STATES IN 1923

The statistics of the fisheries contained in this report apply to the commercial coast fisheries of North Carolina, South Carolina, Georgia, and the eastern coast of Florida for the calendar year 1923. They are the result of a canvass made by the bureau's agents [3] during 1924, and in so far as possible the methods used were similar to those employed in the corresponding canvass of this section for 1918, in order that the statistics obtained might be strictly comparable. The results of the canvass have already been published in condensed form in Statistical Bulletin No. 652 and distributed to the trade. The detailed statistics are published herewith for the first time.

EARLIER PUBLICATIONS

Some of the earlier publications relating to the fisheries of the South Atlantic States and published in Washington, D. C., follow:

1887. North Carolina and Its Fisheries. By R. Edward Earll. *In* The Fisheries and Fishery Industries of the United States, by G. Brown Goode et al., Sec. II, Pt. XII, p. 475–497.
The Fisheries of South Carolina and Georgia. By R. Edward Earll. Ibid., Sec. II, Pt. XIII, p. 499–518.
Eastern Florida and Its Fisheries. By R. Edward Earll. Ibid., Sec. II, Pt. XIV, p. 519–531.
History and Methods of the Fisheries. Ibid., Sec. V, Vol. 1 (xi+808 pp.), Vol. II (xx+881 pp.), and atlas of 275 pls.

1892. V. The Fisheries of the South Atlantic States [1887 and 1888]. *In* Statistical Review of the Coast Fisheries of the United States, prepared under the direction of J. W. Collins. Report, U. S. Commission of Fish and Fisheries, 1888 (1892), pp. 351–361.

1893. Report on the Fisheries of the South Atlantic States. By Hugh M. Smith. Bulletin, U. S. Fish Commission, Vol. XI, 1891 (1893), pp. 269–356, Pls. XLIII–LXXIV.

1897. Report on the Fisheries of Indian River, Fla. By John J. Brice et al. Report, U. S. Commission of Fish and Fisheries, 1896 (1898), pp. 223–262, pls. 23–59.

1898. Report on the Fish and Fisheries of the Coastal Waters of Florida. By John J. Brice. Report, U. S. Commission of Fish and Fisheries, 1896 (1898), pp. 263–342.

1899. Notes on the Extent and Condition of the Alewife Fisheries of the United States in 1896. By Hugh M. Smith. Report, U. S. Commission of Fish and Fisheries, 1898 (1899), pp. 31–43.
The Shad Fisheries of the Atlantic Coast of the United States. By Charles H. Stevenson. Ibid., pp. 101–176.

1900. Statistics of the Fisheries of the South Atlantic States [1897]. Report, U. S. Commission of Fish and Fisheries, 1899 (1900), pp. 171–227.

1905. Statistics of the South Atlantic States, 1902. Report, U. S. Commission of Fish and Fisheries, 1903 (1905), pp. 343–410.

1911. Fisheries of the United States, 1908. Special Reports, Bureau of the Census, 1911.

1921. Fishery Industries of the United States. Report of the Division of Statistics and Methods of the Fisheries for 1920. By Lewis Radcliffe. Appendix V to the Report of the U. S. Commissioner of Fisheries for 1921, pp. 59–120.

COMMON AND SCIENTIFIC NAMES OF FISHES

Trade usage in the nomenclature of fishes is often confused and sometimes renders it impossible to properly separate and distinguish species occurring in the statistical reports. In the following statistics

[3] The data were collected by Winthrop A. Roberts and Rob Leon Greer, assisted by Carl B. Tendick, James Buckley, and Frank E. Kingsbury.

of the South Atlantic States it was found impossible to separate the crappie from the other sunfishes except in the State of Florida. Harvest fish (*Peprilus alepidotus*), caught together with butterfish (*Poronotus triancanthus*), and selling at the same price, were often included with the latter, but separation of the statistics has been made in so far as possible. The pigfish (*Orthopristis chrysopterus*) is sometimes known as hogfish in North Carolina, and it is possible that some of the hogfish reported in North Carolina may be this species rather than the hogfish (*Lachnolaimus maximus*) more commonly found in the Florida waters. Both the fresh-water catfish (Ameiurus species and Ictalurus species) and the salt-water catfish (Felichthys species and Galeichthys species) were included together. In North Carolina it was possible to report the gray trout (*Cynoscion regalis*) and the speckled trout (*Cynoscion nebulosus*) separately; elsewhere they have been included together under the name squeteague or "sea trout."

The following list gives the scientific names of the fishes corresponding to the common names as listed in the statistics in so far as it has been possible to determine them:

Alewives	*Pomolobus æstivalis.* *Pomolobus pseudoharengus.*
Amber fish	Seriola (species).
Angel fish	*Chætodipterus faber.*
Barracuda	Sphyræna (species).
Black bass	*Micropterus dolomieu.* *Micropterus salmoides.*
Bluefish	*Pomatomus saltatrix.*
Blue runner or hardtail	*Caranx crysos.*
Bonito	*Sarda sarda.*
Bowfin	*Amiatus calvus.*
Butterfish	*Poronotus triacanthus.*
Carp, German	*Cyprinus carpio.*
Catfish	Siluridæ (species).
Cero and kingfish	*Scomberomorus regalis.* *Scomberomorus cavalla.*
Crappie	*Pomoxis sparoides.* *Pomoxis annularis.*
Crevalle	Caranx (species).
Croaker	*Micropogon undulatus.*
Drum, black	*Pogonias cromis.*
Drum, red	*Sciænops ocellatus.*
Eels	*Anguilla rostrata.* Other Apodes.
Flounders	Pleuronectidæ (species).
Garfish	*Lepisosteus osseus.*
Gizzard shad	*Dorosoma cepedianum.*
Groupers	Epinephelus (species). Mycteroperca (species). *Garrupa nigrita.*
Grunts	Hæmulonidæ (species).
Harvest fish	*Peprilus alepidotus.*
Hickory shad	*Pomolobus mediocris.*
Hogfish	*Lachnolaimus maximus.*
Jewfish	*Promicrops itaiara.*
King whiting	Menticirrhus (species).
Leather jacket or "turbot"	*Balistes carolinensis.*
Menhaden	*Brevoortia tyrannus.*
Moonfish	*Vomer setipinnis.*
Mullet	*Mugil cephalus.* *Mugil curema.*
Permit	*Trachinotus goodei.*

Pigfish	*Orthopristis chrysopterus.*
Pike or pickerel	Esox (species).
Pinfish or sailor's choice	Lagodon (species).
	Other species.
Pompano	*Trachinotus carolinus.*
	Trachinotus (other species).
Porkfish	*Anisotremus virginicus.*
Scup	Stenotomus (species).
Sea bass	*Centropristes striatus.*
Shad	*Alosa sapidissima.*
Sharks	All Selachii except Batoidei.
Sheepshead	*Archosargus probatocephalus.*
Skates	Batoidei (species).
Snapper, mangrove	*Lutianus griseus.*
Snapper, mutton	*Lutianus analis.*
Snapper, red	*Lutianus blackfordii.*
Snook or sergeant fish	*Centropomus unodecimalis.*
Spanish mackerel	*Scomberomorus maculatus.*
Spot	*Leiostomus xanthurus.*
Squeteagues or "sea trout"	*Cynoscion regalis.*
	Cynoscion nothus.
	Cynoscion nebulosus.
Striped bass	*Roccus lineatus.*
Sturgeon	*Acipenser sturio.*
Suckers	Catostomidæ (species).
Sunfish	Centrarchidæ (species).
Tautog	*Tautoga onitis.*
Tripletail	*Lobotes surinamensis.*
White perch	*Morone americana.*
Yellow perch	*Perca flavescens.*
Yellowtail or "silver perch"	*Bairdiella chrysura.*

GENERAL STATISTICS

The number of persons engaged in the fisheries of the South Atlantic States in 1923 was 16,298, of whom 1,480 were on vessels fishing, 180 on vessels transporting fishery products, 8,614 in shore fisheries and 6,024 shoresmen in the wholesale fishery trade, fish canneries, and similar industries connected with the fisheries. Of the total 9,308 of the persons were in North Carolina, 2,164 in South Carolina, 2,019 in Georgia, and 2,807 on the east coast of Florida.

The capital invested in the fisheries of this region amounted to $8,505,259, distributed as follows: North Carolina, $4,198,894; South Carolina, $606,781; Georgia, $1,378,704; and the east coast of Florida, $2,320,880. The investment included vessels and boats valued at $2,545,644; fishing apparatus used by vessels and boats, $699,604; shore and accessory property to the value of $4,530,711; and cash capital to the amount of $729,300.

The products of the fisheries of this region amounted to 228,747,930 pounds, valued at $5,087,340. Of this total North Carolina produced 95,192,343 pounds, valued at $2,414,499; South Carolina, 6,763,279 pounds, valued at $284,791; Georgia, 39,896,386 pounds, valued at $668,129; and the east coast of Florida 86,895,922 pounds, valued at $1,719,921.

Arranged in order of value, some of the more important fishery products are as follows: Shrimp 23,705,901 pounds, valued at $821,861; menhaden, 148,180,970 pounds, valued at $752,026; shad, 3,190,666 pounds, valued at $716,649; oysters, from both public and private beds, 11,172,336 pounds, valued at $448,137; squeteagues or "sea trout," 5,258,047 pounds, valued at $381,155; mullet, 7,734,412

pounds fresh and 622,000 pounds salted, valued altogether at $378,301; bluefish, 2,004,244 pounds, valued at $214,826; Spanish mackerel, 2,652,341 pounds, valued at $205,987; cero and kingfish, 1,966,596 pounds, valued at $161,201; and alewives or river herring, 2,609,347 pounds fresh and 4,961,050 pounds salted, valued altogether at $146,104.

Compared with the statistics for 1918 there was an increase of 8.3 per cent in the persons engaged, an increase of 14.6 per cent in the investment, and a decrease of 31.2 per cent in the quantity and 4.9 per cent in the value of the products of the fisheries. In North Carolina there was an increase of 15.8 per cent in persons engaged, a decrease of 0.6 per cent in the investment, and a decrease of 54.8 per cent in the quantity and 18.9 per cent in the value of products of the fisheries. In South Carolina there was an increase of 8.2 per cent in persons engaged, 174.2 per cent in investment, and 80.5 per cent in the quantity and 37.1 per cent in the value of products of the fisheries. The fisheries of Georgia also showed increases in all phases of the industry; there was an increase of 20.2 per cent in persons engaged, 79 per cent in the investment, 7.4 per cent in the quantity, and 60.6 per cent in the value of the production. On the east coast of Florida there was a decrease of 15.7 per cent of persons engaged, an increase of 5 per cent in the investment, an increase of 7 per cent in quantity of fishery products, and a decrease of 1.5 per cent in the value of the products.

Practically all of the decrease in production may be attributed to a failure in the menhaden fishery, which in 1923 produced only 148,180,970 pounds, as compared with 257,757,799 pounds in 1918. Other fishes showing a severe decrease since 1918 are alewives, cero and kingfish, red and black drum, mullet, and Spanish mackerel. The yield of shad and squeteague or "sea trout" increased somewhat, and the production of shrimp and oysters was greatly increased over that of 1918.

Persons engaged in the fisheries of the South Atlantic States in 1923

States	On vessels fishing	On vessels transporting	In shore fisheries	Shoresmen	Total
North Carolina	1,055	51	5,140	3,062	9,308
South Carolina	8	94	1,044	1,018	2,164
Georgia	186	29	620	1,184	2,019
Florida (east coast)	231	6	1,810	760	2,807
Total	1,480	180	8,614	6,024	16,298

Investment in the fisheries of the South Atlantic States in 1923

Items	North Carolina		South Carolina		Georgia		Florida (east coast)		Total	
	No.	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*
Vessels fishing:										
Steam	3	$92,500					4	$155,300	7	$247,800
Tonnage	179						353		532	
Outfit		10,400						26,683		37,083
Gasoline	64	471,980	1	$3,500	24	$182,075	7	67,000	96	724,555
Tonnage	1,506		11		469		208		2,194	
Outfit		93,830		2,000		34,763		18,800		147,393
Sail	74	66,230							74	66,230
Tonnage	667								667	
Outfit		11,753								11,753
Accessory gasoline boats	82	25,950							82	25,950
Vessels transporting:										
Gasoline	30	58,000	15	47,700	10	11,700	3	4,100	58	121,500
Tonnage	273		224		99		33		629	
Outfit		22,535		3,250		1,225		550		27,560
Sail	3	4,900	34	22,100	8	8,500			45	35,500
Tonnage	29		362		111				502	
Outfit		650		2,950		455				4,055
Power boats	1,384	330,930	58	22,325	145	130,300	792	517,650	2,379	1,001,205
Sailboats	110	14,780	18	1,800					128	16,580
Rowboats, etc	1,892	42,215	674	13,900	347	7,465	514	14,900	3,427	78,480
Apparatus, vessel fisheries:										
Purse seines	35	53,200			4	7,200	8	10,300	47	70,700
Haul seines	34	21,200							34	21,200
Lines		130		100		300				530
Otter trawls	2	110			16	780	3	150	21	1,040
Dredges	156	4,070			2	100			158	4,170
Tongs	40	226							40	226
Apparatus, shore fisheries:										
Purse seines	9	5,200					5	7,500	14	12,700
Haul seines	529	74,834	16	1,695			85	16,160	630	92,689
Gill nets	12,518	82,923	281	21,460	146	4,560	568	80,475	13,513	189,418
Pound nets	2,873	259,382							2,873	259,382
Fyke nets	548	5,095							548	5,095
Stop nets			7	210					7	210
Cast nets							6	30	6	30
Dip nets	323	157					31	62	354	219
Lines		577		150		40		4,595		5,362
Eel pots	4,129	5,070							4,129	5,070
Spears	152	155	55	47			3	3	210	205
Revolving traps	6	246							6	246
Weirs	5	100							5	100
Otter trawls	48	2,478	8	350	118	5,900	226	12,000	400	20,668
Dredges	729	4,680							729	4,680
Tongs	418	2,618	46	250	134	706	35	251	633	3,825
Rakes	553	540	84	70			12	9	649	619
Grabs			425	540	183	246	4	4	612	790
Crab traps							30	75	30	75
Drag nets	69	255							69	255
Turtle traps	100	100							100	100
Shore and accessory property		2,197,855		366,884		859,889		1,106,083		4,530,711
Cash capital		233,100		95,500		122,500		278,200		729,300
Total		4,198,894		606,781		1,378,704		2,320,880		8,505,259

NOTE.—In this report all craft of 5 net tons and upward are classed as vessels and all under 5 net tons are classed as boats.

Yield of the fisheries of the South Atlantic States, 1923

Species	North Carolina		South Carolina		Georgia	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	1,589,347	$33,366				
Alewives, salted	4,933,050	86,038				
Angel fish	7,305	418				
Black bass	331,161	47,227				
Bluefish	896,694	66,805	7,000	$700		
Bonito	43,070	2,688				
Bowfin	21,009	390				
Butterfish	298,990	14,625				
Carp, German	209,147	10,438				
Catfish	255,318	6,877	2,500	79		
Cero and kingfish	1,139	124				
Cod	340	10				
Crevalle	325	16	7,000	350		
Croaker	2,262,308	53,993	26,000	1,274		
Drum, black	1,794	194	13,050	392		
Drum, red, or redfish	245,443	10,763	31,000	1,730	600	$36
Eels	179,526	17,036				
Flounders	332,773	22,039	27,650	2,164	200	12
Garfish	2,150	20				
Gizzard shad	8,905	177				
Groupers			8,000	480	11,413	571
Grunts	1,100	33			123	10
Harvestfish or "starfish"	520,816	22,217				
Hickory shad	381,521	29,598	7,500	750	10,510	1,066
Jewfish					2,767	111
King whiting	560,159	21,326	83,400	7,823	1,000	100
Menhaden	63,289,940	325,967			26,973,000	149,850
Mullet, fresh	1,379,712	109,464	152,500	11,600	4,000	240
Mullet, salted	369,000	39,305	253,000	23,600		
Pigfish	385,270	8,823				
Pike	13,910	1,413				
Pinfish or sailor's choice	13,860	425			400	24
Pompano	49,547	3,681				
Scup or porgy			8,500	605	1,601	182
Sea bass	102,265	8,217	218,000	20,300	104,090	8,327
Shad	2,370,134	582,591	183,916	43,721	133,750	27,890
Sharks			18,000	360		
Sheepshead	51,685	3,421	1,000	80		
Skate			3,000	60		
Snapper, red	1,200	84	2,000	200	104,970	7,347
Spanish mackerel	182,941	18,740				
Spot, fresh	1,672,223	54,647	56,500	3,880	600	36
Spot, salted	78,500	5,750	50,000	4,600		
Squeteague or "sea trout"	3,984,347	250,847	70,300	6,954	5,000	500
Striped bass	477,001	75,953			360	29
Sturgeon	18,854	3,129	49,406	14,983	32,000	3,600
Sturgeon caviar	305	593	575	1,725	38	114
Suckers	1,394	17				
Sunfish	42,383	815	1,500	120		
Tautog	75	5				
Tripletail	181	9				
White perch	438,542	33,749				
Yellow perch	268,397	16,007				
Other fish	213	13				
Crabs, hard	331,350	5,395	9,000	270	120,000	7,000
Crabs, soft	182,296	27,692				
Shrimp	1,658,476	50,772	355,000	12,425	10,668,380	373,303
Clams, hard	263,536	64,064	85,640	9,611		
Oysters, market, public	3,904,446	228,351	4,587,226	99,534	948,787	57,380
Oysters, market, private	12,950	1,225	445,116	14,421	771,547	29,391
Scallops	554,574	46,214				
Octopus					50	10
Terrapin	360	120			1,200	1,000
Turtles	9,086	583				
Total	95,192,343	2,414,499	6,763,279	284,791	39,896,386	668,129

Yield of the fisheries of the South Atlantic States, 1923—Continued

Species	Florida (east coast)		Total	
	Pounds	*Value*	*Pounds*	*Value*
Alewives, fresh	1,020,000	$25,500	2,609,347	$58,866
Alewives, salted	28,000	1,200	4,961,050	87,238
Amber fish	4,100	128	4,100	128
Angel fish	3,200	118	10,505	536
Barracuda	2,700	86	2,700	86
Black bass	82,293	8,379	413,454	55,606
Bluefish	1,100,550	147,321	2,004,244	214,826
Blue runner or hardtail	179,400	4,244	179,400	4,244
Bonito	350	12	43,420	2,700
Bowfin			21,009	390
Butterfish			298,990	14,625
Carp, German			209,147	10,438
Catfish	783,440	38,372	1,041,258	45,328
Cero and kingfish	1,965,457	161,077	1,966,596	161,201
Cod			340	10
Crappie	65,403	3,532	65,403	3,532
Crevalle	164,600	5,049	171,925	5,415
Croaker	21,500	674	2,309,858	55,941
Drum, black	46,700	1,519	61,544	2,105
Drum, red, or redfish	121,850	4,434	398,893	16,963
Eels			179,526	17,036
Flounders	5,850	489	366,473	24,704
Garfish			2,150	20
Gizzard shad			8,905	177
Groupers	17,200	900	36,613	1,951
Grunts	7,650	307	8,873	350
Harvestfish or "starfish"			520,816	22,217
Hickory shad			399,531	31,414
Hogfish	1,550	64	1,550	64
Jewfish	250	7	3,017	118
King whiting	175,300	6,812	819,859	36,061
Leatherjacket or "turbot"	400	16	400	16
Menhaden	57,918,030	276,209	148,180,970	752,026
Moonfish	2,200	69	2,200	69
Mullet, fresh	6,198,200	194,092	7,734,412	315,396
Mullet, salted			622,000	62,905
Permit	5,700	179	5,700	179
Pigfish	14,150	435	399,420	9,258
Pike			13,910	1,413
Pinfish or sailor's choice	51,130	1,561	65,390	2,010
Pompano	60,650	8,926	110,197	12,607
Porkfish	2,000	60	2,000	60
Scup or porgy	2,000	110	12,101	897
Sea bass	4,175	264	428,530	37,108
Sergeant fish or snook	139,700	4,273	139,700	4,273
Shad	502,866	62,447	3,190,666	716,649
Sharks			18,000	360
Sheepshead	32,100	1,329	84,785	4,830
Skate			3,000	60
Snapper, mangrove	26,500	1,004	26,500	1,004
Snapper, mutton	123,100	4,305	123,100	4,305
Snapper, red	11,600	776	119,770	8,407
Spanish mackerel	2,469,400	187,247	2,652,341	205,987
Spot, fresh	71,700	2,877	1,801,023	61,440
Spot, salted			128,500	10,350
Squeteague or "sea trout"	1,198,400	122,854	5,258,047	381,155
Striped bass			477,361	75,982
Sturgeon			100,260	21,712
Sturgeon caviar			918	2,432
Suckers			1,394	17
Sunfish	476,809	19,672	520,692	20,607
Tautog			75	5
Tripletail			181	9
White perch			438,542	33,749
Yellow perch			268,397	16,007
Yellowtail or "silver perch"	28,650	897	28,650	897
Other fish			213	13
Crabs, hard	72,000	3,600	[1] 532,350	16,265
Crabs, soft			[2] 182,296	27,692
Sea crawfish or spiny lobsters	156,200	11,634	156,200	11,634
Shrimp	11,024,045	385,361	23,705,901	821,861
Clams, hard	4,560	1,665	[3] 353,736	75,340
Oysters, market, public	464,214	14,475	[4] 9,906,673	399,740
Oysters, market, private	36,050	3,360	[5] 1,265,663	48,397
Scallops			[6] 554,574	46,214
Octupus			50	10
Terrapin			1,560	1,120
Turtles			9,086	583
Total	86,895,922	1,719,921	228,747,930	5,087,340

[1] 1,597,050 in number.
[2] 546,888 in number.
[3] 44,217 bushels.
[4] 1,415,239 bushels.
[5] 180,809 bushels.
[6] 92,429 bushels.

Extent of the fisheries of the South Atlantic States, various years, 1880 to 1923[1]

	North Carolina	South Carolina	Georgia	Florida (east coast)	Total
PERSONS ENGAGED	*Number*	*Number*	*Number*	*Number*	*Number*
1880	5,274	1,005	899	368	7,546
1887	7,352	1,280	627	[2]	[2]
1888	7,704	1,346	638	851	10,539
1889	8,655	2,642	1,497	1,244	14,038
1890	10,274	2,701	1,622	1,404	16,001
1897	12,045	2,139	1,869	1,132	17,185
1902	14,755	3,713	2,286	2,698	23,452
1908	9,681	2,559	2,525	3,196	17,961
1918	8,036	2,000	1,680	3,330	15,046
1923	9,308	2,164	2,019	2,807	16,298
INVESTMENT	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
1880	506,561	66,275	78,770	43,554	695,160
1887	766,881	92,930	61,806	[2]	[2]
1888	801,474	97,189	65,556	109,670	1,073,889
1889	968,600	107,205	120,975	128,434	1,325,214
1890	1,243,988	127,762	174,431	142,105	1,688,286
1897	1,218,459	174,354	284,864	151,155	1,828,832
1902	1,973,441	320,723	342,150	354,835	2,991,149
1908	1,270,000	114,000	409,000	531,000	2,324,000
1918	4,222,043	221,251	769,998	2,210,679	7,423,971
1923	4,198,894	606,781	1,378,704	2,320,880	8,505,259
PRODUCTS					
Quantity:	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1880	32,249,488	6,143,250	2,272,500	2,286,750	42,951,988
1887	45,124,956	4,075,537	1,882,790	[2]	[2]
1888	43,022,855	4,180,847	1,957,749	[2]	[2]
1889	45,545,643	4,879,125	2,643,533	5,982,375	59,050,676
1890	51,799,142	4,944,840	2,994,117	7,463,531	67,201,630
1897	64,234,257	5,280,446	4,993,100	5,882,662	80,390,465
1902	67,584,734	8,174,463	11,102,610	19,584,265	106,446,072
1908	101,422,000	14,104,000	14,828,000	36,521,000	166,875,000
1918	210,501,750	3,746,932	37,153,953	81,211,488	332,614,123
1923	95,192,343	6,763,279	39,896,386	86,895,922	228,747,930
Value:	*Dollars*	*Dollars*	*Dollars*	*Dollars*	*Dollars*
1880	845,695	212,482	119,993	78,408	1,256,578
1887	772,957	157,688	80,745	[2]	[2]
1888	776,439	163,657	82,910	173,886	1,196,892
1889	950,427	200,381	105,727	199,043	1,455,578
1890	1,027,669	202,602	123,563	219,870	1,573,704
1897	1,316,017	210,456	170,605	136,077	1,833,155
1902	1,739,661	263,023	359,081	477,868	2,839,633
1908	1,776,000	288,000	701,000	1,269,000	4,034,000
1918	2,978,708	207,690	416,043	1,746,175	5,348,616
1923	2,414,499	284,791	668,129	1,719,921	5,087,340

[1] Statistics for 1908 are from data published by the Bureau of the Census.
[2] Statistics not available.

COMPARISON OF YIELD OF CERTAIN SPECIES IN VARIOUS YEARS

In the foregoing statistics of the products of the fisheries a number of species have been shown fresh and salted as marketed by the fishermen, the quantity salted varying more or less in different years. In order to afford a comparison of the total catch of the more important species on a uniform basis, the quantities salted by the fishermen have been converted to the equivalent of weights of fresh fish, and the total catch of each species is shown as in the fresh condition in the tables below. Varying practices in salting fish make it difficult to determine the actual shrinkage that may have occurred when the fresh fish were salted, but the losses in salting of various species are thought to be approximately as follows: Alewives, croaker, mullet, shad, and spot, 33⅓ per cent; bluefish, sheepshead, Spanish mackerel, squeteague, and striped bass, 50 per cent; red and black drum, 65 per

cent. These figures were used as a basis for converting the salt fish to a fresh-fish basis throughout the comparisons. The statistics on oysters, clams, and scallops are given in pounds and represent the meat or edible portion only.

Certain species of importance occurring in all of the South Atlantic States have been assembled in the first of the following tables. It is interesting to note that of the seven fishery products listed, only shrimp have shown a continuously increased production during years for which statistics are available. This product has increased from comparative insignificance in 1897 to a commodity of first importance in 1923, its production in the latter year exceeding 23,000,000 pounds, as compared with about 600,000 pounds in 1897. The production of oysters reached its peak in 1908, when nearly 30,000,000 pounds were reported; in 1918 the production had dropped below 6,000,000 pounds, and in 1923 it increased again to over 11,000,000 pounds, which is approximately one-third of the maximum production recorded. Of the fishes, shad is probably of most interest. In 1897 this species showed the greatest yield—over 11,000,000 pounds. Since then the decline was continuous until 1918 and 1923, when about 3,000,000 pounds were reported. The production of alewives, amounting to 22,000,000 pounds in 1890, dropped to less than 14,000,000 pounds in 1908, increased again to 18,000,000 pounds in 1918, and then decreased to 10,000,000 pounds in 1923. This is the lowest production on record and is less than one-half of the peak production. Mullet, one of the staple food fishes of the South, reached its maximum production of 16,000,000 pounds in 1902, and the catch has since declined continuously, until in 1923 its production totaled less than 9,000,000 pounds. Squeteagues and drum attained their maximum production in 1908 and have since shown a distinct reduction in yield. It is apparent that the most important food fishes of the South Atlantic States are being caught in alarmingly smaller quantities in the recent years than in the earlier years of the fishery. Reference to tables showing the yield of certain species in each of the States also reveals a strikingly lower production of many of the more important fishes in recent years as compared with the previous years.

The following tables give comparative statistics of the yield of certain fishery products in the South Atlantic States in various years, 1889 to 1923.

Comparative statistics of the yield of certain fishery products of the South Atlantic States in various years, 1889 to 1923

Year	Alewives	Drum, red and black	Mullet	Shad	Squeteague or "sea trout"	Shrimp	Oysters
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
1889	19, 389, 254	1, 038, 197	5, 990, 867	8, 387, 428	2, 460, 950	743, 640	8, 895, 572
1890	22. 174, 325	745, 605	7, 065, 944	9, 432, 029	2, 613, 584	744, 025	8, 344, 805
1897	20, 906, 968	846, 683	7, 281, 722	11, 268, 343	3, 824, 770	627, 221	11, 285, 268
1902	15, 601, 672	583, 394	16, 034, 101	9, 849, 338	5, 050, 419	3, 810, 641	22, 719, 074
1908	13, 782, 000	1, 421, 000	15, 489, 200	8, 572, 000	8, 628, 000	5, 697, 000	29, 973, 000
1918	18, 057, 523	1, 007, 311	11, 986, 343	2, 888, 644	5, 105, 329	15, 656. 903	5, 871, 376
1923	10, 050, 922	460, 437	8, 667, 412	3, 190, 666	5, 258, 047	23, 705, 901	11, 172, 336

Compararative statistics of the yield of certain fishery products of North Carolina in various years, 1889 to 1923

Species	1889	1890	1897	1902	1908	1918	1923
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Alewives	19,316,094	22,111,605	20,838,555	15,173,475	12,530,000	17,355,758	8,988,922
Bluefish	1,077,611	1,539,008	1,909,975	1,049,342	1,257,800	322,744	896,694
Butterfish			94,750	83,218	1,302,000	731,257	819,806
Croaker	327,868	353,525	(1)	1,938,635	1,177,000	386,807	2,262,308
Drum, red and black	515,290	219,417	230,801	211,309	343,000	99,546	247,237
Eels	55,250	160,615	96,700	507,111	258,000	174,541	179,526
Flounders	48,200	48,630	173,975	261,762	403,000	91,121	332,773
Menhaden	8,753,250	12,410,400	11,310,000	18,862,000	57,412,000	179,910,599	63,289,940
Mullet	4,252,726	4,891,564	4,715,665	8,428,785	6,013,700	1,285,704	1,933,212
Pompano	8,200	9,750	53,175	19,590	11,000	8,685	49,547
Sea bass	228,900	33,075	189,225	57,250	72,000	111,650	102,265
Shad	5,402,586	5,815,088	8,963,488	6,566,724	3,942,000	1,657,036	2,370,134
Sheepshead	187,202	202,025	271,206	154,929	249,000	26,223	51,685
Spanish mackerel	82,445	100,050	330,840	354,084	457,000	149,440	182,941
Spot	440,565	498,810	(1)	977,095	852,000	1,257,508	1,789,973
Squeteagues	1,971,119	2,131,194	3,173,750	3,983,606	4,648,000	3,361,406	3,984,347
Striped bass	536,449	573,841	845.123	1,175,400	510,000	286,528	477,001
Sturgeon	227,797	175,210	404,125	144,705	62,000	7,587	19,159
Crabs	50,000	47,400	1,026,720	203,441	390,000	379,310	513,646
Shrimp	135,240	144,200	146,496	84,160	371,000	940,120	1,658,476
Clams, hard			937,808	1,175,176	726,000	197,576	263,536
Oysters, market	7,011,340	5,650,820	6,011,726	7,159,691	5,275,000	1,518,734	3,917,396
Scallops	15.750	18,000	118,323	13,020	(1)	422,832	554,574

[1] Statistics not available.

Comparative statistics of the yield of certain fishery products of South Carolina in various years, 1889 to 1923

Species	1889	1890	1897	1902	1908	1918	1923
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Alewives	37,160	28,600	2,000			9,500	
Bluefish	110,060	100,480	40,000	1,000	7,400	3,000	7,000
Croaker	(1)	(1)	(1)	27,000	85,000	16,000	26,000
Drum, red and black	261,175	273,028	325,000	177,200	109,000	6,000	44,050
Flounders				1,900	4,700	16,200	27,650
Mullet	464,400	552,813	61,000	138,600	708,500	272,100	532,000
Sea bass	886,274	826,164	632,400	709,545	491,000	132,000	218,000
Shad	577,457	563,259	506,125	434,133	464,000	167,462	183,916
Sheepshead	38,640	39,100	36,200	26,650	20,000	2,100	1,000
Spot	(1)	(1)	(1)	21,800	66,000	75,325	131,500
Squeteague	116,113	103,106	80,000	85,700	183,000	59,150	70,300
Striped bass	10,785	11,560	10,100	9,800	5,000		
Sturgeon	284,730	216,099	480,905	94,150	(1)	117,890	49,981
Crabs, hard	86,230	93,260	110,000	96,200	33,000	18,000	9,000
Shrimp	380,400	371,840	374,500	369,500	452,000	55,400	355,000
Clams, hard			185,400	225,064	76,000	800	85,640
Oysters, market	305,340	442,050	1,504,300	4,827,900	10,941,000	2,783,830	5,032,342

[1] Statistics not available.

Comparative statistics of the yield of certain fishery products of Georgia in various years, 1889 to 1923

Species	1889	1890	1897	1902	1908	1918	1923
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Alewives	36,000	24,000	25,000	22,500	32,000		
Drum, red and black	48,675	53,870	38,100	60,000	151,000	1,674	600
Flounders			6,500	2,600	7,200	10,800	200
Groupers				50,000	160,000	27,758	11,413
Menhaden						29,484,600	26,973,000
Mullet	57,425	52,740	56,000	125,800	194,000	10,650	4,000
Sea bass	8,200	10,000		76,500	233,000	292,615	104,090
Shad	356,352	399,660	787,550	1,029,050	1,333,000	100,540	133,750
Sheepshead	5,165	5,000	25,000	50,000	64,000	400	
Snapper, red				125,000	880,000	112,349	104,970
Squeteague	130,337	144,000	54,650	82,550	140,000	39,550	5,000
Striped bass	13,260	9,000	9,000	2,500	8,900	125	360
Sturgeon	212,235	83,560	157,300		100,000	39,150	32,038
Crabs, hard	43,267	47,866	74,660	80,000	196,000	8,455	120,000
Shrimp	150,000	162,160	67,600	344,127	528,000	5,793,465	10,668,380
Oysters, market	1,142,400	1,570,485	3,406,440	8,568,000	10,053,000	1,109,822	1,720,334

Comparative statistics of the yield of certain fishery products of the east coast of Florida in various years, 1889 to 1923

Species	1889	1890	1897	1902	1908	1918	1923
	Pounds	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*	*Pounds*
Alewives		10,120	41,413	405,697	1,220,000	692,265	1,062,000
Bluefish	5,240	7,310	46,421	79,500	372,000	561,301	1,100,550
Bream and sunfish	497,305	588,190	248,989	643,514	1,409,000	(1)	476,809
Croaker	(1)	(1)	(1)	6,593	92,000	124,278	21,550
Drum, red and black	213,057	199,290	252,782	134,885	818,000	900,091	168,550
Flounders				49,380	99,000	13,490	5,850
Groupers				26,910	45,000	74,783	17,200
Menhaden	8,000					48,362,600	57,918,030
Mullet	1,216,316	1,568,827	2,449,057	7,340,916	8,573,000	10,417,889	6,198,200
Pompano	12,434	30,135	196,344	265,231	276,000	133,419	60,650
Sea bass	10,800	10,445	5,570	29,800	110,000	41,331	4,175
Shad	2,051,033	2,654,022	1,011,180	1,819,431	2,833,000	963,606	502,866
Sheepshead	264,491	274,113	390,164	404,251	1,098,000	104,303	32,100
Snapper, red				20,000	60,000	20,200	11,600
Snapper, other				8,043	110,000	264,264	149,600
Spanish mackerel			3,450	659,088	1,228,000	3,061,965	2,469,400
Spot	(1)	(1)	(1)	32,451	130,000	393,030	71,700
Squeteague	243,381	235,284	516,370	898,563	3,657,000	1,645,223	1,198,400
Sturgeon	42,620	29,930			55,000		
Crabs, hard	3,000	4,100	3,700	6,066	146,000	52,000	72,000
Shrimp	78,000	65,825	38,625	3,012,854	4,346,000	8,867,918	11,024,045
Oysters, market	436,492	681,450	362,802	2,163,483	3,704,000	458,990	502,264

[1] Statistics not available.

MENHADEN INDUSTRY

The menhaden industry of the South Atlantic States in 1923 was prosecuted in North Carolina, Georgia, and on the east coast of Florida. There were 20 factories in operation, having a value of $1,835,751. The cash or working capital employed amounted to $212,000. There were 906 persons engaged in the factories, and the wages paid amounted to $175,215. The vessels and boats employed included 6 steam vessels, 39 gas vessels, 1 transporting vessel, and 3 motor boats, having a value of $965,029. The tonnage of the vessels was 2,138 net tons, and there were 997 fishermen. There were 49 purse seines used with vessels and boats, and the catch amounted to 148,180,970 pounds, or 246,968,283 in number, valued at $752,026. In addition to this there were 16,309,167 pounds or 27,181,945 menhaden, valued at $83,176, delivered to the menhaden firms by vessels other than those having their home ports in the South Atlantic States, making a total of 164,490,137 pounds, or 274,150,228 menhaden, valued at $835,202, utilized by these firms. Of the 20 menhaden factories 17 were located in North Carolina, but the greater part of the catch was taken in Georgia and on the east coast of Florida. The products, consisting of oil, fish scrap, and meal, in North Carolina were valued at $738,743, and in Georgia and the east coast of Florida at $593,008. The statistics are given in detail in the following table:

Menhaden industry of the South Atlantic States, 1923

Items	North Carolina		Georgia and Florida (east coast)		Total	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*
Firms	17	$1,508,899	3	$326,852	20	$1,835,751
Cash capital		87,000		125,000		212,000
Shoresmen	791		115		906	
Wages paid		119,543		55,672		175,215
Fishermen	660		337		997	
Vessels, steam	2	67,400	4	180,833	6	248,233
Net tonnage	160		353		513	
Vessels, gas	32	492,728	7	216,068	39	708,796
Net tonnage	1,240		369		1,609	
Power boats	3	1,500			3	1,500
Transporting vessels	1	6,500			1	6,500
Net tonnage	16				16	
Purse seines:						
On steam vessels	2	3,000	4	6,100	6	9,100
On gas vessels	33	50,200	7	10,400	40	60,600
On boats	3	4,000			3	4,000
Total	38	57,200	11	16,500	49	73,700
Catch:						
By steam vessels—pounds	2,292,400	22,930	33,172,260	161,472	35,464,660	184,402
By gas vessels—do	59,497,540	295,537	51,718,770	264,587	111,216,310	560,124
By boats—do	1,500,000	7,500			1,500,000	7,500
Total—do	63,289,940	325,967	84,891,030	426,059	[1] 148,180,970	752,026
Menhaden utilized [2]—do	79,599,107	409,143	84,891,030	426,059	[3] 164,490,137	835,202
Products:						
Oil—gallons	777,829	349,245	433,700	181,641	1,211,529	530,886
Dry scrap and meal—tons	4,596	210,712	5,744	277,327	10,340	488,039
Acidulated scrap—pounds	7,068	178,786	5,168	134,040	12,236	312,826
Total		738,743		593,008		1,331,751

[1] 246,968,283 in number.
[2] This item includes in addition to the catch 16,309,167 pounds, or 27,181,945 menhaden, valued at $83,176, delivered to North Carolina firms by vessels other than those having their home ports in the South Atlantic States.
[3] 274,150,228 in number.

FISHERIES OF NORTH CAROLINA

The fisheries of North Carolina in 1923 furnished employment for 9,308 persons, of whom 6,246 were directly employed in fishing operations and the transporting of fish to landing points, 669 in the wholesale fishery trade, and 2,393 in the canning, by-products, and other fishery industries.

The investment in the fishing equipment and fishery industries amounted to $4,198,894, of which $1,244,653 were invested in fishing and transporting vessels and boats, $523,286 in fishing gear, and $2,430,955 in investment and cash capital used in the fish trade and industries.

The production of fishery products by fishermen amounted to 95,192,343 pounds, valued at $2,414,499, of which 88,275,269 pounds, valued at $1,990,083, were fish, and 6,917,074 pounds, valued at $424,416, were shellfish. Some of the more important fishes, arranged in order of value, were the following: Shad, 2,370,134 pounds, valued at $582,591; menhaden, 63,289,940 pounds, valued at $325,967; squeteagues, 3,984,347 pounds, valued at $250,847, of which 3,070,437 pounds, valued at $134,531, were gray "trout" and 913,910 pounds, valued at $116,316, were speckled "trout"; mullet, 1,379,712 pounds fresh and 369,000 pounds salted, valued at $148,769; alewives, 1,589,347 pounds fresh and 4,933,050 pounds salted, valued at $119,404; striped bass, 477,001 pounds, valed at $75,953; bluefish, 896,694 pounds, valued at $66,805; spot, 1,672,223 pounds fresh and 78,500 pounds salted, valued at $60,397; and croakers, 2,262,308

pounds, valued at $53,993. Of the shellfish the following, arranged in order of value, were most important: Oysters, 3,904,446 pounds from public beds and 12,950 pounds from private beds, valued at $229,576; hard clams, 263,536 pounds, valued at $64,064; shrimp, 1,658,476 pounds, valued at $50,772; and scallops, 554,574 pounds, valued at $46,214.

Compared with 1918 there was an increase in the number of persons employed of 1,272, or 15.83 per cent, but a decrease in the investment of $23,149, or 0.55 per cent. There was also a decrease in the products of 115,309,407 pounds, or 54.78 per cent, in quantity and of $564,209, or 18.94 per cent, in value. The decrease in production was due to a falling off in the catch of menhaden.

The following tables give the number of persons employed, investment, and products of the fisheries of North Carolina, by counties, in 1923:

Persons engaged in the fisheries of North Carolina in 1923, by counties

Counties	On vessels fishing	On vessels transporting	In shore fisheries	Shoresmen	Total
Beaufort	51	9	155	150	365
Bertie			23	16	39
Bladen			25		25
Brunswick	189	8	583	301	1,081
Camden			6		6
Carteret	630	22	1,297	1,546	3,495
Chowan			193	108	301
Craven	3	1	51	10	65
Cumberland			50		50
Currituck			298		298
Dare	9	2	697	73	781
Duplin			75		75
Gates			38		38
Hertford			20	10	30
Hyde	21	2	230	4	257
Jones			2		2
Martin			67	34	101
New Hanover	60		504	547	1,111
Onslow			185	24	209
Pamlico	85	2	194	159	440
Pasquotank	7		36	10	53
Pender			157		157
Perquimans			58		58
Tyrrell			88	5	93
Washington		5	108	65	178
Total	1,055	51	5,140	3,062	9,308

Investment in the fisheries of North Carolina in 1923, by counties

Items	Beaufort		Bertie		Bladen		Brunswick	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Vessels fishing:								
Gasoline	1	$700					12	$161,300
Tonnage	9						414	
Outfit		30						22,870
Sail	16	13,700						
Tonnage	125							
Outfit		1,720						
Accessory gasoline boats	9	1,150						
Vessels transporting:								
Gasoline	5	12,300					4	14,000
Tonnage	40						54	
Outfit		6,460						1,625
Sail							1	4,000
Tonnage							16	
Outfit								375
Power boats	49	9,000	5	$675			43	42,900
Sailboats	7	2,200						
Rowboats, etc	70	1,380	10	145	25	$150	219	3,185
Apparatus, vessel fisheries:								
Purse seines							10	17,500
Otter trawls							2	110
Dredges	34	908						

Investment in the fisheries of North Carolina in 1923, by counties—Continued

Items	Beaufort		Bertie		Bladen		Brunswick	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Apparatus, shore fisheries:								
Haul seines	8	$3,400					21	$2,630
Gill nets	424	2,415			25	$350	59	1,360
Pound nets	123	12,110	56	$4,520				
Eel pots	130	300						
Otter trawls							34	1,955
Oyster dredges	14	350						
Tongs and rakes							216	567
Shore and accessory property		109,220		2,000		50		508,440
Cash capital		34,500						34,500
Total		211,843		7,340		550		817,317

Items	Camden		Carteret		Chowan		Craven	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Vessels fishing:								
Steam			1	$35,500				
Tonnage			19					
Gasoline			48	304,180				
Tonnage			1,058					
Outfit				68,605				
Sail			22	17,605			1	$500
Tonnage			196				8	
Outfit				5,998				225
Accessory gasoline boats			44	21,150			1	150
Vessels transporting:								
Gasoline			16	21,200			1	1,500
Tonnage			141				12	
Outfit				10,000				2,500
Sail			1	300				
Tonnage			7					
Outfit				200				
Power boats	3	$475	563	141,875	52	$10,225	14	3,300
Sailboats			55	3,075				
Rowboats, etc	2	50	393	7,780	42	2,745	27	661
Apparatus, vessel fisheries:								
Purse seines			23	32,700				
Haul seines			34	21,200				
Lines				130				
Dredges			46	1,350			2	100
Tongs			38	211				
Apparatus, shore fisheries:								
Purse seines			3	4,000				
Haul seines			135	25,855			7	675
Gill nets	50	400	3,013	22,959	151	4,920	191	826
Pound nets			264	17,665	668	64,375		
Fyke nets	44	330						
Lines				50				
Eel pots	40	130	150	373				
Spears			22	45				
Otter trawls			14	463				
Scallop dredges			651	3,265				
Oyster dredges			2	50				
Tongs and rakes			430	1,111				
Other apparatus				412				
Shore and accessory property		50		631,187		18,150		8,225
Cash capital				92,100				6,500
Total		1,435		1,492,594		100,415		25,162

Items	Cumberland		Currituck		Dare		Duplin	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Vessels fishing:								
Gasoline					1	$4,000		
Tonnage					9			
Outfit						75		
Sail					2	1,000		
Tonnage					14			
Outfit						135		
Vessels transporting:								
Gasoline					1	1,000		
Tonnage					8			
Outfit						300		
Power boats			162	$16,865	236	50,325		
Sailboats					4	400		
Rowboats, etc	25	$125	28	707	239	8,601	35	$215
Apparatus, vessel fisheries:								
Dredges					4	100		
Tongs					2	15		
Apparatus, shore fisheries:								
Purse seines					6	1,200		
Haul seines			143	10,635	100	12,479	10	400
Gill nets	25	260	200	1,025	4,318	10,235	90	450

Investment in the fisheries of North Carolina in 1923, by counties—Continued

Items	Cumberland		Currituck		Dare		Duplin	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Apparatus, shore fisheries—Contd.								
Pound nets			37	$2,175	1,187	119,117		
Fyke nets			395	3,585				
Lines						$225		
Eel pots			2,820	3,028	810	940		
Oyster dredges					2	35		
Tongs and rakes					19	89		
Other apparatus						100		
Shore and accessory property		$250		7,350		69,023		$25
Cash capital						2,500		
Total		635		45,370		281,894		1,090

Items	Gates		Hertford		Hyde		Jones	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Vessels fishing:								
Sail					7	$3,850		
Tonnage					61			
Outfit						990		
Accessory gasoline boats					5	700		
Vessels transporting:								
Sail					1	600		
Tonnage					6			
Outfit						75		
Power boats	1	$100	2	$200	86	19,540		
Sailboats					27	4,905		
Rowboats, etc	32	350	8	140	31	885	2	$30
Apparatus, vessel fisheries:								
Dredges					14	285		
Apparatus, shore fisheries:								
Haul seines			3	400	7	950		
Gill nets	47	425	14	95	1,153	4,150	2	30
Pound nets	8	400	14	700	157	17,900		
Fyke nets	36	370						
Lines						2		
Eel pots					12	25		
Spears					5	10		
Oyster dredges					26	390		
Tongs and rakes					134	809		
Shore and accessory property		200		225		6,550		20
Cash capital						2,000		
Total		1,845		1,760		64,616		80

Items	Martin		New Hanover		Onslow		Pamlico	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*	*Number*	*Value*
Vessels fishing:								
Steam			2	$57,000				
Tonnage			160					
Outfit				10,400				
Sail							25	$28,375
Tonnage							257	
Outfit								2,635
Accessory gasoline boats							23	2,800
Vessels transporting:								
Gasoline							2	2,000
Tonnage							12	
Outfit								1,300
Power boats	3	$1,100	3	2,425	15	$2,465	56	13,625
Sailboats							17	4,200
Rowboats, etc	18	770	240	6,540	143	2,066	79	1,645
Apparatus, vessel fisheries:								
Purse seines			2	3,000				
Dredges							50	1,177
Apparatus, shore fisheries:								
Haul seines	4	2,600	37	3,000	8	560	31	2,150
Gill nets	3	75	243	6,250	157	2,818	703	2,150
Pound nets							147	8,125
Lines				300				
Eel pots							122	207
Spears			70	70				
Oyster dredges							34	590
Tongs and rakes			60	45	35	162	29	150
Other apparatus		346						
Shore and accessory property		5,090		715,450		4,120		47,245
Cash capital				31,000		3,500		16,500
Total		9,981		835,480		15,691		134,874

Investment in the fisheries of North Carolina in 1923, by counties—Continued

Items	Pasquotank		Pender		Perquimans	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*
Vessels fishing:						
Gasoline	2	$1,800				
Tonnage	16					
Outfit		250				
Sail	1	1,200				
Tonnage	6					
Outfit		50				
Power boats	16	3,800	4	$800	18	$3,400
Rowboats, etc	15	455	132	1,060	22	515
Apparatus, vessel fisheries:						
Dredges	6	150				
Apparatus, shore fisheries:						
Haul seines			13	1,100		
Gill nets	361	5,315	53	960	421	6,690
Pound nets					34	1,700
Fyke nets	73	810				
Eel pots	45	67				
Spears			55	30		
Tongs and rakes			48	225		
Shore and accessory property		31,200		565		3,175
Cash capital		10,000				
Total		55,097		4,740		15,480

Items	Tyrrell		Washington		Total	
	Number	*Value*	*Number*	*Value*	*Number*	*Value*
Vessels fishing:						
Steam					3	$92,500
Tonnage					179	
Outfit						10,400
Gasoline					64	471,980
Tonnage					1,506	
Outfit						91,830
Sail					74	66,230
Tonnage					667	
Outfit						11,753
Accessory gasoline boats					82	25,950
Vessels transporting:						
Gasoline			1	$6,000	30	58,000
Tonnage			6		273	
Outfit				350		22,535
Sail					3	4,900
Tonnage					29	
Outfit						650
Power boats	34	$4,635	19	3,200	1,384	330,930
Sailboats					110	14,780
Rowboats, etc	28	850	27	1,165	1,892	42,215
Apparatus, vessel fisheries:						
Purse seines					35	53,200
Haul seines					34	21,200
Lines						130
Otter trawls					2	110
Dredges					156	4,070
Tongs					40	226
Apparatus, shore fisheries:						
Purse seines					9	5,200
Haul seines			2	8,000	529	74,834
Gill nets	655	6,370	160	2,395	12,518	82,923
Pound nets	80	4,995	98	5,600	2,873	259,382
Fyke nets					548	5,095
Lines						577
Eel pots					4,129	5,070
Spears					152	155
Otter trawls					48	2,418
Scallop dredges					651	3,265
Oyster dredges					78	1,415
Tongs and rakes					971	3,158
Other apparatus						858
Shore and accessory property		5,790		24,255		2,197,855
Cash capital						233,100
Total		22,640		50,965		4,198,894

Yield of the fisheries of North Carolina in 1923, by counties and species

Species	Beaufort		Bertie		Bladen		Brunswick	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	160,795	$1,850	22,832	$330				
Alewives, salted			111,550	2,123				
Angel fish	475	34						
Black bass	4,600	455	180	45				
Bluefish	1,215	85						
Butterfish	1,400	35						
Catfish	33,648	435	975	37			1,300	$130
Croaker	52,940	2,017					4,425	241
Drum, black							1,140	114
Drum, red, or redfish	7,200	250					13,825	1,323
Eels	21,475	2,940	50	6				
Flounders	3,973	296	50	3			20,000	1,025
Gizzard shad			200	2				
Hickory shad	71,854	4,524	1,200	98			110	22
King whiting							9,350	375
Menhaden							20,289,600	99,398
Mullet, fresh	13,000	1,200					32,500	2,840
Mullet, salted							340,050	34,515
Pigfish	79,015	1,621					70	7
Pike	1,750	140	100	20				
Pinfish, or sailor's choice	3,900	84					1,075	101
Shad	70,216	14,037	7,555	1,869	6,000	$1,600	1,750	385
Sheepshead	100	16					1,050	158
Spanish mackerel	720	89						
Spot, fresh	44,615	1,818					23,265	1,136
Spot, salted							78,500	5,750
Squeteague ("sea trout"), gray	199,714	6,290					10,600	1,657
Squeteague ("sea trout") speckled	30,906	4,829						
Striped bass	30,895	3,915	3,425	684			3,800	760
Sunfish	1,550	88						
White perch	7,515	439	1,095	110				
Yellow perch	40,280	2,027	100	8				
Shrimp							1,357,684	40,726
Clams, hard							104,000	26,000
Oysters, market, public	347,900	28,125					25,900	925
Oysters, market, private	4,200	600						
Total	1,235,851	78,239	149,312	5,335	6,000	1,600	22,319,994	217,588

Species	Camden		Carteret		Chowan		Craven	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	500	$10	24,850	$895	633,510	$9,992	36,000	$280
Alewives, salted					2,787,600	46,880		
Angel fish			5,000	252				
Black bass	250	40					100	2
Bluefish			511,190	45,199				
Bonito			37,870	2,557				
Bowfin	800	16						
Butterfish			177,426	9,350				
Carp, German	3,000	180			4,931	297	2,025	21
Catfish	500	20			15,715	629	21,400	428
Cero			1,139	124				
Croaker			1,734,495	34,700			73,500	2,940
Drum, red, or redfish			96,470	3,347				
Eels	1,000	100	15,535	2,325	6,585	721		
Flounders			70,762	3,419			7,150	654
Garfish							2,150	20
Grunts			1,100	33				
Harvest fish or "starfish"			219,070	7,892				
Hickory shad			66,850	3,399	62,307	6,035	100	6
King whiting			190,650	10,971				
Menhaden			40,707,940	203,639				
Mullet, fresh			495,404	34,365			41,800	4,180
Mullet, salted			6,800	760				
Pigfish			277,835	5,714				
Pinfish or sailor's choice			1,060	40				
Pompano			15,360	1,501				
Red snapper			1,200	84				
Sea bass			102,265	8,247				
Shad	9,500	2,400	103,319	26,044	201,496	46,303	205,637	54,510
Sheepshead			36,185	2,322				
Spanish mackerel			131,173	13,568				
Spot, fresh			766,248	17,919			36,500	1,460
Squeteague ("sea trout"), gray			815,290	39,073			33,900	2,712

Yield of the fisheries of North Carolina in 1923, by counties and species—Contd.

Species	Camden		Carteret		Chowan		Craven	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Squeteague ("sea trout"), speckled			418,900	$46,699			73,000	$10,950
Striped bass	500	$100	35,990	6,502	45,650	$7,242	19,425	3,622
Sunfish	1,000	20					2,500	150
Tautog			75	5				
White perch	734	57	300	54	29,660	2,972	23,200	2,320
Yellow perch	9,866	744			5,122	398	1,750	105
Crabs, soft			181,996	27,673				
Shrimp			252,792	8,606				
Clams, hard			115,192	26,292				
Oysters, market, public			1,591,156	89,477			28,000	1,800
Oysters, market, private			1,750	125				
Scallops			554,574	46,214				
Turtles			300	7				
Total	27,650	3,687	49,765,511	729,363	3,792,576	121,469	608,137	86,170

Species	Cumberland		Currituck		Dare		Duplin	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh			13,050	$562	276,228	$11,477	150	$6
Alewives, salted			15,000	300	20,400	254		
Angel fish					785	48		
Black bass			270,750	39,733	41,145	4,884		
Bluefish			2,200	176	326,881	16,555		
Bonito			800	19	4,400	112		
Bowfin			16,950	190	213	4		
Butterfish			500	10	53,264	3,359		
Carp, German			179,037	9,260	15,649	519		
Catfish			71,026	1,643	36,151	949		
Cod					340	10		
Croaker			10,200	204	180,078	6,883		
Drum, black					154	5		
Drum, red, or redfish			1,100	19	73,938	3,980		
Eels			95,192	7,980	23,089	994		
Flounders			7,900	289	162,991	9,577		
Gizzard shad					504	10		
Harvest fish or "starfish"			1,550	31	155,526	10,404		
Hickory shad			1,000	35	37,419	2,520	315	57
King whiting			38,000	760	230,474	4,925		
Mullet, fresh					50,867	4,032		
Pigfish					10,000	400		
Pike			3,550	320	1,300	142		
Pompano			3,500	166	22,212	1,348		
Shad	9,500	$2,200	11,825	4,005	1,164,106	299,972	3,970	1,095
Sheepshead			2,000	138	9,375	568		
Spanish mackerel			1,050	105	25,248	2,124		
Spot, fresh			44,000	880	486,345	15,220		
Squeteague ("sea trout"), gray			10,600	444	1,072,128	53,241		
Squeteague ("sea trout"), speckled			8,400	840	208,828	27,692		
Striped bass			31,490	5,534	96,054	13,062		
Sturgeon					13,964	2,306		
Sturgeon caviar					305	593		
Suckers			1,300	13				
Sunfish			35,965	412	285	15		
Tripletail					181	9		
White perch			203,400	13,943	31,233	1,591		
Yellow perch			151,912	9,492	10,250	400		
Other fish					163	5		
Crabs, hard					331,350	5,395		
Crabs, soft					300	19		
Clams, hard					344	97		
Oysters, market, public					57,288	4,485		
Terrapin					360	120		
Turtles					8,786	576		
Total	9,500	2,200	1,233,247	97,503	5,240,901	510,881	4,435	1,158

Yield of the fisheries of North Carolina in 1923, by counties and species—Contd.

Species	Gates		Hertford		Hyde		Jones	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	14,000	$174	28,600	$359	48,400	$1,079	2,000	$40
Alewives, salted	26,000	390	42,000	630				
Black bass	1,700	306	150	26				
Bluefish					28,995	1,512		
Bowfin	2,000	160						
Butterfish					43,240	1,150		
Catfish	12,850	414	1,450	69				
Croaker					39,460	659		
Drum, red, or redfish					20,900	413		
Eels	100	10	150	15	250	13		
Flounders					14,940	580		
Harvest fish or "starfish"					144,670	3,890		
Hickory shad					33,825	3,240		
King whiting					20,785	616		
Mullet, fresh					5,100	510		
Mullet, salted					22,150	4,030		
Pigfish					5,100	76		
Pike	25	5	75	15				
Pompano					7,350	535		
Shad	9,863	2,051	950	200	180,988	38,622		
Sheepshead					2,200	100		
Spanish mackerel					13,450	1,345		
Spot, fresh					26,085	417		
Squeteague ("sea trout"), gray					569,335	15,049		
Squeteague ("sea trout"), speckled					25,900	3,820		
Striped bass	100	15	300	45	21,250	3,628		
White perch	15,225	1,523	2,750	275	600	18		
Yellow perch	3,675	294	150	12	4,000	120		
Clams, hard					3,200	600		
Oysters, market, public					538,342	29,478		
Total	85,538	5,342	76,575	1,646	1,820,515	111,500	2,000	40

Species	Martin		New Hanover		Onslow		Pamlico	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	54,000	$648			130,522	$2,292	39,710	$1,914
Alewives, salted	340,000	5,950						
Angel fish			200	$10			445	54
Black bass							6,075	760
Bluefish			6,950	1,665	14,853	1,189	1,910	174
Butterfish							23,160	721
Carp, German	200	6						
Catfish	300	5					6,600	184
Crevalle			325	16				
Croaker			15,390	757	16,220	1,223	127,600	3,969
Drum, black			500	75				
Drum, red, or redfish			15,400	770			8,610	201
Eels							10,325	1,326
Flounders			25,400	3,580			4,100	328
Hickory shad	1,450	59	1,825	366			22,410	1,471
King whiting			6,700	350	61,200	3,209		
Menhaden			2,292,400	22,930				
Mullet, fresh			381,700	32,440	250,990	19,235	36,700	3,670
Pigfish			12,250	913			200	12
Pike							3,925	314
Pinfish or sailor's choice			250	13			7,575	187
Pompano			200	25			675	81
Shad	2,192	392	79,650	18,586			56,012	12,543
Sheepshead							275	44
Spanish mackerel			4,400	700			6,900	809
Spot, fresh			105,500	7,825	19,650	1,477	41,515	1,920
Squeteague ("sea trout"), gray			1,665	333	89,470	7,395	263,735	8,177
Squeteague ("sea trout"), speckled			6,300	1,260	45,376	6,729	87,300	12,222
Striped bass	5,300	795			6,145	1,044	17,860	3,315
Sturgeon			4,800	800				
White perch	13,200	864	500	25			1,625	163
Yellow perch							32,725	1,654
Shrimp			48,000	1,440				
Clams, hard			18,000	5,375	12,800	3,200		
Oysters, market, public			28,000	1,400	58,415	6,021	1,170,995	62,790
Oysters, market, private							7,000	500
Total	416,642	8,719	3,056,305	101,654	705,641	53,014	1,985,962	119,503

Yield of the fisheries of North Carolina in 1923, by counties and species—Contd.

Species	Pasquotank		Pender		Perquimans	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	10,200	$612	125	$3	83,975	$719
Alewives, salted	10,000	50			25,000	175
Angel fish			400	20		
Black bass	3,636	509			425	70
Bluefish			2,500	250		
Bowfin	976	19			70	1
Carp, German	1,554	70			451	18
Catfish	23,214	813			2,844	85
Croaker			8,000	400		
Drum, red, or redfish			8,000	460		
Eels	2,100	235			1,000	100
Flounders	630	43	14,500	2,220	377	25
Gizzard shad	4,536	92			3,665	73
Hickory shad	4,915	344	150	25	18,091	1,870
King whiting			3,000	120		
Mullet, fresh	601	48	71,000	6,940	50	4
Pigfish			800	80		
Pike	1,750	131			85	8
Pompano			250	25		
Shad	40,238	11,863	3,150	895	68,641	13,703
Sheepshead			500	75		
Spot, fresh			78,500	4,575		
Squeteague ("sea trout"), gray			4,000	160		
Squeteague ("sea trout"), speckled			9,000	1,275		
Striped bass	6,028	904	500	100	18,514	2,948
Stugeon					90	23
Suckers	69	3			25	1
Sunfish	1,008	121			75	9
White perch	9,106	820			2,479	226
Yellow perch	4,277	342			350	28
Other fish					50	8
Clams, hard			10,000	2,500		
Oysters, market, public	29,050	2,450	29,400	1,400		
Total	153,888	19,469	243,775	21,523	226,257	20,094

Species	Tyrrell		Washington		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	2,000	$25	7,900	$99	1,589,347	$33,366
Alewives, salted	251,500	3,771	1,304,000	25,515	4,933,050	86,038
Angel fish					7,305	418
Black bass	1,550	279	600	108	331,161	47,227
Bluefish					896,694	66,805
Bonito					43,070	2,688
Bowfin					21,009	390
Butterfish					298,990	14,625
Carp, German	1,425	42	875	25	209,147	10,438
Catfish	18,595	744	8,750	292	255,318	6,877
Cero					1,139	124
Cod					340	10
Crevalle					325	16
Croaker					2,262,308	53,993
Drum, black					1,794	194
Drum, red, or redfish					245,443	10,763
Eels	2,000	200	675	71	179,526	17,036
Flounders					332,773	22,039
Garfish					2,150	20
Gizzard shad					8,905	177
Grunts					1,100	33
Harvest fish or "starfish"					520,816	22,217
Hickory shad	40,800	4,070	16,900	1,457	381,521	29,598
King whiting					560,159	21,326
Menhaden					63,289,940	325,967
Mullet, fresh					1,379,712	109,464
Mullet, salted					369,000	39,305
Pigfish					385,270	8,823
Pike	1,000	230	350	88	13,910	1,413
Pinfish or sailor's choice					13,860	425
Pompano					49,547	3,681
Red snapper					1,200	84
Sea bass					102,265	8,217
Shad	59,850	13,444	73,726	15,872	2,370,134	582,591
Sheepshead					51,685	3,421
Spanish mackerel					182,941	18,740
Spot, fresh					1,672,223	54,647
Spot, salted					78,500	5,750

Yield of the fisheries of North Carolina in 1923, by counties and species—Contd.

Species	Tyrrell		Washington		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Squeteague ("sea trout"), gray					3,070,437	$134,531
Squeteague ("sea trout"), speckled					913,910	116,316
Striped bass	41,000	$7,380	92,775	$14,358	477,001	75,953
Sturgeon					18,854	3,129
Sturgeon caviar					305	593
Suckers					1,394	17
Sunfish					42,383	815
Tautog					75	5
Tripletail					181	9
White perch	30,170	3,620	65,750	4,729	438,542	33,749
Yellow perch	3,150	315	790	68	268,397	16,007
Other fish					213	13
Crabs, hard					[1] 331,350	5,395
Crabs, soft					[2] 182,296	27,692
Shrimp					1,658,476	50,772
Clams, hard					[3] 263,536	64,064
Oysters, market, public					[4] 3,904,446	228,351
Oysters, market, private					[5] 12,950	1,225
Scallops					[6] 554,574	46,214
Terrapin					360	120
Turtles					9,086	583
Total	453,040	34,120	1,573,091	62,682	95,192,343	2,414,499

[1] 994,050 in number.
[2] 546,888 in number.
[3] 32,942 bushels.
[4] 557,778 bushels.
[5] 1,850 bushels.
[6] 92,429 bushels.

FISHERIES BY APPARATUS

The vessel fisheries of North Carolina in 1923 employed 3 steamers, 64 motor vessels, 74 sailing vessels, and in addition 82 accessory gas boats, some of them employed as auxiliary power for sailing vessels and others in connection with the long-haul seine fishing. There were 35 purse seines, 34 haul seines, 2 otter trawls, 156 dredges, 40 tongs, and lines to the value of $130 used in the vessel fisheries The total yield by all forms of apparatus used on vessels was 66,355,182 pounds, valued at $543,167.

The catch by purse seines, consisting entirely of menhaden, and by far the most important apparatus in the vessel fishery, amounted to 61,789,940 pounds, valued at $318,467. The catch by dredges, which was next in importance, consisted of 2,048,508 pounds or 292,644 bushels of oysters, valued at $120,692, and 26,600 pounds of hard crabs, valued at $500. Haul seines were third in importance, with a catch of 2,128,505 pounds, valued at $71,439, most of which consisted of squeteagues, or "sea trout," and croaker. Next in order of value was the catch by lines, amounting to 132,220 pounds, valued at $19,054, consisting largely of sea bass and bluefish. The catch by tongs, consisting of oysters, and the catch by otter trawls, consisting of shrimp, made up the remainder of the yield of the vessel fishery.

In the shore or boat fisheries the total yield by all forms of apparatus was 28,837,161 pounds, valued at $1,871,332. The catch by pound nets, which were the most productive form of apparatus used in the shore fisheries, amounted to 9,279,555 pounds, valued at $532,667. Some of the more important species taken in pound nets were alewives, 1,233,805 pounds fresh and 3,326,550 pounds salted, valued together at $81,984; squeteagues, 1,781,808 pounds, valued at $72,117; and shad, 1,110,678 pounds, valued at $270,421.

A number of other species were taken in considerable quantities also. The catch with purse and haul seines in the shore fisheries amounted to 9,408,598 pounds, valued at $444,599. The catch with purse seines was 1,516,023 pounds, valued at $9,825, of which 1,500,000 pounds, valued at $7,500, was menhaden, while the remainder consisted of striped bass and squeteagues. The catch with haul seines was 7,892,575 pounds, valued at $434,774. Among the more important species taken in haul seines were alewives, 102,815 pounds fresh and 1,533,000 pounds salted, valued together at $31,012; spot, 1,040,316 pounds fresh and 66,000 pounds salted, valued together at $36,449; mullet, 582,474 pounds fresh and 271,000 pounds salted, valued together at $74,296; and squeteagues, 826,536 pounds, valued at $74,457. Various other species, as black bass, bluefish, German carp, catfish, croaker, red drum, king whiting, pigfish, striped bass, white perch, yellow perch, crabs, and shrimp, were also taken in large quantities. The yield by gill nets, which was much less in quantity but exceeded that of seines in value, amounted to 5,221,200 pounds, valued at $581,849. The principal species included in the catch, in the order of their value, were shad, 1,182,898 pounds, valued at $293,320; mullet, 796,060 pounds fresh and 98,000 pounds salted, valued together at $74,377; squeteagues 775,697 pounds fresh and 202,006 pounds salted, valued together at $73,968; bluefish 483,287 pounds, valued at $30,680; and striped bass, 158,124 pounds valued at $27,865. The catch taken with dredges, tongs, rakes, and hands totaled 2,506,697 pounds, valued at $207,633. The catch consisted principally of oysters, scallops, and hard clams. A small quantity of soft crabs was also taken with rakes. Various species were taken with fyke nets, amounting to 210,121 pounds, valued at $14,533, and with lines, 356,750 pounds, valued at $8,678.

The catch with otter trawls amounted to 1,470,174 pounds, valued at $44,250, of which 1,440,940 pounds, valued at $43,287, were shrimp and the remainder consisted of various species of fish. The catch with eelpots consisted of 160,402 pounds of eels, valued at $15,569 and with spears, 73,000 pounds of flounders, valued at $7,280. With other forms of apparatus, such as stop nets, cast nets, dip nets, revolving traps, crab traps, drag nets, and turtle traps, there were taken 150,664 pounds of various species, valued at $14,254. The largest item in this catch was 84,121 pounds of soft crabs, valued at $12,592. The products of the vessel and shore fisheries are shown separately by counties in the appended tables:

Yield of the vessel fisheries of North Carolina in 1923, by counties, apparatus, and species

Apparatus and species	Brunswick		Cartaret		New Hanover		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines: Menhaden	20,289,600	$99,398	39,207,940	$196,139	2,292,400	$22,930	61,789,940	$318,467
Haul seines:								
Angel fish			4,000	200			4,000	200
Bluefish			79,200	3,960			79,200	3,960
Butterfish			35,600	1,780			35,600	1,780
Croaker			1,220,000	24,400			1,220,000	24,400
Drum, red			52,620	1,380			52,620	1,380
Flounders			4,535	199			4,535	199
Harvest fish or "starfish"			48,000	2,400			48,000	2,400

Yield of the vessel fisheries of North Carolina in 1923, by counties, apparatus, and species—Continued

Apparatus and species	Brunswick		Cartaret		New Hanover		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
King whiting			11,900	$595			11,900	$595
Pigfish			138,000	2,760			138,000	2,760
Pompano			6,300	630			6,300	630
Sheepshead			2,000	200			2,000	200
Spanish mackerel			3,950	395			3,950	395
Spot			128,000	2,560			128,000	2,560
Squeteague ("sea trout"), gray			189,200	9,460			189,200	9,460
Squeteague ("sea trout"), speckled			205,200	20,520			205,200	20,520
Total			2,128,505	71,439			2,128,505	71,439
Lines:								
Angel fish			360	20			360	20
Bluefish			61,800	13,476			61,800	13,476
Flounders			900	50			900	50
Grunt			800	24			800	24
Pigfish			300	9			300	9
Pinfish or sailor's choice			660	26			660	26
Red snapper			700	49			700	49
Sea bass			66,700	5,400			66,700	5,400
Total			132,220	19,054			132,220	19,054
Otter trawls: Shrimp	50,524	$1,515					50,524	1,515

Apparatus and species	Beaufort		Carteret		Craven		Dare	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Dredges:								
Crabs, hard							26,600	$500
Oysters, market, public	291,200	$22,875	753,963	$42,947	28,000	$1,800	14,000	1,000
Oysters, market, private	4,200	600						
Total	295,400	23,475	753,963	42,947	28,000	1,800	40,600	1,500
Tongs: Oysters, market, public			171,885	11,000			7,000	500

Apparatus and species	Hyde		Pamlico		Pasquotank		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Dredges:								
Crabs, hard							26,600	$500
Oysters, market, public	104,300	$6,015	823,795	$43,005	29,050	$2,450	2,044,308	120,092
Oysters, market, private							4,200	600
Total	104,300	6,015	823,795	43,005	29,050	2,450	2,075,108	121,192
Tongs: Oysters, market, public							178,885	11,500

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species

BY PURSE SEINES

Species	Carteret		Dare		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Menhaden	1,500,000	$7,500			1,500,000	$7,500
Squeteague, speckled			500	$73	500	73
Striped bass			15,523	2,252	15,523	2,252
Total	1,500,000	7,500	16,023	2,325	1,516,023	9,825

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY HAUL SEINES

Species	Beaufort		Brunswick		Cartaret		Craven	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	40,285	$424			5,000	$50	36,000	$280
Angel fish					540	27		
Black bass	1,500	75						
Bluefish					186,045	12,198		
Bonito					1,600	32		
Butterfish					20,475	784		
Carp, German							2,025	21
Catfish	28,368	292					21,400	428
Croaker	7,150	191	500	$20	345,840	6,903	73,500	2,940
Drum, red, or redfish	4,350	174			42,035	1,903		
Eels	8,475	340						
Flounders	1,280	111			13,842	687	2,150	194
Garfish							2,150	20
Harvest fish or "starfish"					11,050	590		
Hickory shad	26,859	1,260			8,150	417		
King whiting			500	25	37,860	1,846		
Mullet, fresh			9,000	740	227,500	16,025	15,500	1,550
Mullet, salted			271,000	27,400				
Pigfish	78,165	1,604			124,600	2,509		
Pompano					8,145	815		
Shad	11,141	2,562			4,265	1,725		
Sheepshead					21,220	1,082		
Spanish mackerel					38,535	3,800		
Spot, fresh	3,890	311	7,300	335	417,950	9,057	36,500	1,460
Spot, salted			66,000	4,800				
Squeteague, gray	7,800	338	2,000	200	126,975	8,172	33,900	2,712
Squeteague, speckled	3,880	659			184,275	22,069	73,000	10,950
Striped bass	8,190	1,232					13,200	2,376
Sunfish	100	10						
White perch	5,900	307					8,100	810
Yellow perch	24,475	1,224						
Other fish [1]			100	4	75	5		
Crabs, soft					96,543	14,881		
Shrimp					115,673	4,430		
Total	261,808	11,114	356,400	33,524	2,038,193	110,007	317,425	23,741

Species	Currituck		Dare		Duplin		Hertford	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	2,450	$42	4,000	$215	80	$3	15,000	$188
Alewives, salted			8,000	160			15,000	225
Angel fish			613	37				
Black bass	268,700	39,389	40,750	4,830				
Bluefish	2,200	176	43,425	2,872				
Bonito	800	19	4,400	112				
Bowfin	15,000	151	100	2				
Butterfish	500	10	2,300	46				
Carp, German	154,037	7,760	15,000	490				
Catfish	65,526	1,400	13,075	238				
Cod			182	5				
Croaker	10,200	204	105,682	3,519				
Drum, black			64	2				
Drum, red, or redfish	1,100	19	36,829	1,753				
Flounders	7,900	289	51,832	2,266				
Harvest fish or "starfish"	1,550	31	6,800	136				
Hickory shad	1,000	35	10,000	600	170	30		
King whiting	38,000	760	221,402	4,470				
Mullet, fresh			2,574	97				
Pigfish			10,000	400				
Pike	3,550	320	1,300	142				
Pompano	3,500	166	19,620	1,005				
Shad			52,035	12,381	1,925	520		
Sheepshead	2,000	138	9,200	552				
Spanish mackerel	1,050	105	6,900	656				
Spot, fresh	44,000	880	387,476	11,226				
Squeteague, gray	10,600	444	119,176	5,574				
Squeteague, speckled	8,400	840	107,860	13,094				
Striped bass	24,140	3,869	45,917	5,681				
Suckers	1,300	13						
Sunfish	30,765	308	200	8				
White perch	189,400	12,225	24,000	920			100	10
Yellow perch	75,012	3,821	9,000	300				
Total	962,680	73,414	1,359,712	73,789	2,175	553	30,100	423

[1] Crevalle, hogfish, pinfish, and tautog.

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY HAUL SEINES—Continued

Species	Hyde		Martin		New Hanover		Onslow	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, salted			310,000	$5,425				
Angel fish					200	$10		
Bluefish	620	$37			5,700	1,425	6,300	$504
Croaker	2,800	43			13,400	670		
Drum, black					500	75		
Drum, red, or redfish	5,000	100			3,400	170		
Flounders	40	2			100	15		
Harvest fish or "starfish"	835	25						
Hickory shad			1,450	59				
King whiting	225	10			5,500	290	45,650	2,282
Mullet, fresh	5,000	500			254,700	21,770	20,200	1,544
Pigfish	750	11			10,450	778		
Pompano					200	25		
Shad			2,192	392				
Sheepshead	100	10						
Spot, fresh	10,700	160			50,000	3,750		
Squeteague, gray	63,500	1,715					14,452	1,011
Squeteague, speckled	5,250	525			6,300	1,260	5,267	532
Striped bass			5,300	795			2,400	415
White perch			12,600	810	500	25		
Other fish [1]					575	29		
Shrimp					48,000	1,440		
Total	94,820	3,138	331,542	7,481	399,525	31,732	94,269	6,288

Species	Pamlico		Pender		Washington		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh							102,815	$1,202
Alewives, salted					1,200,000	$24,000	1,533,000	29,810
Angel fish			400	$20			1,753	94
Black bass							310,950	44,294
Bluefish	300	$36	2,500	250			247,090	17,498
Bonito							6,800	163
Bowfin							15,100	153
Butterfish							23,275	840
Carp, German							171,062	8,271
Catfish	400	10					128,769	2,368
Cod							182	5
Croaker	77,000	1,545	8,000	400			644,072	16,435
Drum, black							564	77
Drum, red, or redfish	8,300	189	8,000	460			109,014	4,768
Eels							8,475	340
Flounders	2,400	210	1,500	240			81,044	4,014
Garfish							2,150	20
Harvest fish or "starfish"							20,235	782
Hickory shad							47,629	2,401
King whiting			3,000	120			352,137	9,803
Mullet, fresh			48,000	4,670			582,474	46,896
Mullet, salted							271,000	27,400
Pigfish	200	12	800	80			224,965	5,394
Pike							4,850	462
Pompano	675	81	250	25			32,390	2,117
Shad					5,000	1,270	76,558	18,850
Sheepshead			500	75			33,020	1,857
Spanish mackerel	300	45					46,785	4,606
Spot, fresh	10,000	345	72,500	4,125			1,040,316	31,649
Spot, salted							66,000	4,800
Squeteague, gray	26,936	845	4,000	160			409,339	21,171
Squeteague, speckled	13,965	2,082	9,000	1,275			417,197	53,286
Striped bass	9,500	1,900	500	100	80,000	12,000	189,147	28,368
Suckers							1,300	13
Sunfish							31,065	326
White perch					50,000	3,000	290,600	18,107
Yellow perch							108,487	5,345
Other fish [1]							750	38
Crabs, soft							96,543	14,881
Shrimp							163,673	5,870
Total	149,976	7,300	158,950	12,000	1,335,000	40,270	7,892,575	434,774

[1] Crevalle, hogfish, pinfish, and tautog.

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY GILL NETS

Species	Beaufort		Bladen		Brunswick		Camden	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	1,975	$22						
Angel fish	100	8						
Black bass	2,250	270						
Bluefish	400	40						
Catfish	1,580	81			1,300	$130		
Croaker	19,200	1,000			1,560	151		
Drum, black					1,140	114		
Drum, red, or redfish	1,700	63			13,825	1,323		
Flounders	765	56			5,500	550		
Hickory shad	9,620	678			110	22		
King whiting					1,050	105		
Mullet, fresh	13,000	1,200			23,500	2,100		
Mullet, salted					69,050	7,115		
Pigfish					70	7		
Pike	1,750	140						
Pinfish or sailor's choice	2,700	54			975	97		
Shad	7,968	1,575	6,000	$1,600	1,750	385	9,500	$2,400
Sheepshead	100	16			1,050	158		
Spanish mackerel	100	15						
Spot, fresh	13,000	650			12,800	695		
Spot, salted					12,500	950		
Squeteague, gray	3,365	317			7,700	1,430		
Squeteague, speckled	19,515	3,023						
Striped bass	2,510	411			3,800	760		
Sunfish	100	10						
White perch							234	19
Yellow perch	13,815	699					866	69
Total	118,513	10,328	6,000	1,600	157,680	16,092	10,600	2,488

Species	Carteret		Chowan		Craven		Cumberland	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	12,500	$625	6,910	$190				
Black bass					100	$12		
Bluefish	182,090	15,380						
Bonito	30,000	2,400						
Butterfish	375	30						
Carp, German			550	17				
Catfish			4,300	172				
Cero	500	60						
Croaker	113,370	2,479						
Drum, red, or redfish	715	49						
Flounders	1,540	103			5,000	460		
Harvest fish or "starfish"	2,025	117						
Hickory shad	39,300	2,080	23,022	2,453	100	6		
King whiting	140,555	8,520						
Mullet, fresh	267,904	18,340			26,300	2,630		
Mullet, salted	6,800	760						
Pigfish	14,735	430						
Shad	39,740	11,929	115,580	26,457	205,637	54,510	9,500	$2,200
Sheepshead	12,815	1,025						
Spanish mackerel	49,570	5,462						
Spot, fresh	199,225	5,790						
Squeteague, gray	134,755	8,849						
Squeteague, speckled	28,925	4,035						
Striped bass	24,960	4,747	13,300	2,261	6,225	1,246		
Sunfish					2,500	150		
White perch	300	54	3,050	305	15,100	1,510		
Yellow perch					1,750	105		
Total	1,302,699	93,264	166,712	31,855	262,712	60,629	9,500	2,200

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY GILL NETS—Continued

Species	Currituck		Dare		Duplin		Gates	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	1,000	$35	4,300	$212	70	$3	8,000	$100
Alewives, salted							8,000	120
Bluefish			267,989	12,910				
Catfish							1,375	55
Croaker			9,418	428				
Drum, red, or redfish			24,674	1,480				
Hickory shad			6,070	426	145	27		
King whiting			371	19				
Mullet, fresh			47,716	3,887				
Shad	4,025	1,350	463,673	116,616	2,045	575	9,563	1,987
Sheepshead			75	7				
Spanish mackerel			200	16				
Spot, fresh			6,168	286				
Squeteague, gray			511,145	25,557				
Squeteague, speckled			93,732	13,578				
Striped bass	400	120	17,802	2,577				
Sturgeon			10,500	1,750				
Sturgeon caviar			145	193				
White perch	7,500	1,125					1,225	123
Total	12,925	2,630	1,463,978	179,942	2,260	605	28,163	2,385

Species	Hertford		Hyde		Jones		Martin		New Hanover	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	4,600	$58	2,000	$50	2,000	$40				
Alewives, salted							30,000	$525		
Bluefish			21,875	1,312					1,250	$240
Catfish	400	16								
Croaker			4,260	66					1,990	87
Drum, red, or redfish			7,400	143						
Flounders									2,300	115
Hickory shad			2,375	450					1,825	366
King whiting			2,010	101					1,200	60
Mullet, fresh			100	10					127,000	10,670
Mullet, salted			22,150	4,030						
Pigfish			3,100	46					1,800	135
Shad			19,913	5,352					79,650	18,586
Spanish mackerel			500	50					4,400	700
Spot, fresh			9,100	142					55,500	4,075
Squeteague, gray			22,800	743					1,665	333
Squeteague, speckled			11,600	1,560						
Striped bass			4,500	1,100						
Sturgeon									4,800	800
White perch	400	40								
Total	5,400	114	133,683	15,155	2,000	40	30,000	525	283,380	36,167

Species	Onslow		Pamlico		Pasquotank		Pender	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	130,522	$2,292	1,450	$73	10,200	$612	125	$3
Alewives, salted					10,000	50		
Angel fish			445	54				
Black bass			6,075	760				
Bluefish	8,553	685	1,130	113				
Catfish			4,425	140				
Croaker	16,220	1,223	45,085	2,313				
Drum, red, or redfish			310	12				
Flounders			960	59				
Gizard shad					4,536	92		
Hickory shad			5,575	401	4,915	344	150	25
King whiting	15,550	927						
Mullet, fresh	230,790	17,691	36,700	3,670			23,000	2,270
Pike			3,925	314				
Pinfish or sailor's choice			7,575	187				
Shad			5,300	1,040	40,238	11,863	3,150	895
Sheepshead			275	44				
Spanish mackerel			350	54				
Spot, fresh	19,650	1,477	30,865	1,543			6,000	450
Squeteague, gray	75,018	6,384	16,249	627				
Squeteague, speckled	40,109	6,197	8,125	1,335				
Striped bass	3,745	629	6,340	1,104	6,028	904		
White perch			1,050	105	1,500	135		
Yellow perch			32,090	1,614	2,000	160		
Total	540,157	37,505	214,299	15,562	79,417	14,160	32,425	3,643

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY GILL NETS—Continued

Species	Perquimans		Tyrrell		Washington		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	8,975	$269	2,000	$25			196,627	$4,609
Alewives, salted			11,500	171	14,000	$240	73,500	1,106
Angel fish							545	62
Black bass	400	66					8,825	1,108
Bluefish							483,287	30,680
Bonito							30,000	2,400
Butterfish							375	30
Carp, German	426	17	1,175	35	500	15	2,651	84
Catfish	2,444	73	5,095	204	1,500	50	22,419	921
Cero							500	60
Croaker							211,103	7,747
Drum, black							1,140	114
Drum, red, or redfish							48,624	3,070
Flounders	377	25					16,442	1,368
Gizzard shad	3,665	73					8,201	165
Harvest fish or "starfish"							2,025	117
Hickory shad	17,791	1,834	37,700	3,760	16,500	1,425	165,198	14,297
King whiting							160,736	9,732
Mullet, fresh	50	4					796,060	62,472
Mullet, salted							98,000	11,905
Pigfish							19,705	618
Pike	60	4					5,735	458
Pinfish or sailor's choice							11,250	338
Shad	64,141	13,079	53,250	11,959	42,275	8,962	1,182,898	293,320
Sheepshead							14,315	1,250
Spanish mackerel							55,120	6,297
Spot, fresh							352,308	15,108
Spot, salted							12,500	950
Squeteague, gray							775,697	44,240
Squeteague, speckled							202,006	29,728
Striped bass	18,364	2,921	39,000	7,020	11,150	2,065	158,124	27,865
Sturgeon	90	23					15,390	2,573
Sturgeon caviar							145	193
Sunfish	75	9					2,675	169
White perch	2,229	201	2,020	242	750	79	35,358	3,938
Yellow perch	100	8	950	95	50	5	51,621	2,755
Other fish	95	2					95	2
Total	119,282	18,608	152,690	23,511	86,725	12,841	5,221,200	581,849

BY POUND NETS

Species	Beaufort		Bertie		Carteret		Chowan	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	118,535	$1,404	22,832	$330	7,350	$220	626,600	$9,802
Alewives, salted			111,550	2,123			2,787,600	46,880
Black bass	850	110	180	45				
Bluefish	815	45			1,555	125		
Bonito					6,270	125		
Butterfish	1,400	35			120,976	6,756		
Carp, German							4,381	280
Catfish	3,700	62	975	37			11,415	457
Croaker	26,590	826			55,285	918		
Drum, red, or redfish	1,150	13			1,100	15		
Eels			50	6			6,585	721
Flounders	1,928	129	50	3	14,245	580		
Harvestfish or "starfish"					157,995	4,785		
Hickory shad	35,375	2,586	1,200	98	19,400	902	39,285	3,582
King whiting					335	10		
Pigfish	850	17						
Pike			100	20				
Pinfish or sailor's choice	1,200	30						
Pompano					915	56		
Shad	51,107	9,900	7,555	1,869	59,314	12,390	85,916	19,846
Sheepshead					150	15		
Spanish mackerel	620	74			39,118	3,911		
Spot	27,725	857			21,073	512		
Squeteague, gray	185,549	5,635			363,360	12,492		
Squeteague, speckled	7,511	1,147						
Striped bass	20,195	2,272	3,425	684	11,030	1,755	32,350	4,981
Sunfish	1,350	68						
White perch	1,615	132	1,095	110			26,610	2,667
Yellow perch	1,990	104	100	8			5,122	398
Other fish	375	26	200	2	1,204	81		
Turtles					300	7		
Total	490,430	25,472	149,312	5,335	880,975	45,655	3,625,864	89,614

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY POUND NETS—Continued

Species	Currituck		Dare		Gates		Hertford	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	8,000	$450	267,928	$11,050	6,000	$74	9,000	$113
Alewives, salted	15,000	300	12,400	94	18,000	270	27,000	405
Black bass			395	54	100	18	150	26
Bluefish			15,467	773				
Butterfish			50,964	3,313				
Carp, German	2,500	150	649	29				
Catfish	1,750	93	23,076	711	675	35	1,050	53
Cod			158	5				
Croaker			64,978	2,936				
Drum, red, or redfish			12,435	747				
Eels			89	4	100	10	150	15
Flounders			111,159	7,311				
Harvestfish or "starfish"			148,726	10,268				
Hickory shad			21,349	1,494				
King whiting			8,701	436				
Mullet			577	48				
Pike					25	5	75	15
Pompano			2,592	343				
Shad	7,800	2,655	648,398	170,975	300	64	950	200
Sheepshead			100	9				
Spanish mackerel			18,148	1,452				
Spot			92,701	3,708				
Squeteague, gray			441,807	22,110				
Squeteague, speckled			6,736	947				
Striped bass	3,850	925	16,812	2,552	100	15	300	45
Sturgeon			3,464	556				
Sturgeon caviar			160	400				
Sunfish			85	7				
Trippletail			181	9				
White perch	2,500	300	7,233	671	1,400	140	2,250	225
Yellow perch	900	96	1,250	100	75	6	150	12
Other fish			1,042	31				
Turtles			3,786	76				
Total	42,300	4,969	1,983,546	243,219	26,775	637	41,075	1,109

Species	Hyde		Pamlico		Perquimans	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	46,400	$1,029	38,260	$1,841	75,000	$450
Alewives, salted					25,000	175
Black bass					25	4
Bluefish	6,500	163	480	25		
Butterfish	43,240	1,150	23,160	721		
Carp, German					25	1
Catfish			1,775	34	400	12
Croaker	32,400	550	5,515	111		
Drum, red, or redfish	8,500	170				
Eels					1,000	100
Flounders	12,900	478	740	59		
Harvestfish or "starfish"	143,835	3,865				
Hickory shad	31,450	2,790	16,835	1,070	300	36
King whiting	18,550	505				
Pigfish	1,250	19				
Pike					25	4
Pompano	7,350	535				
Shad	161,075	33,270	50,712	11,503	4,500	624
Sheepshead	2,100	90				
Spanish mackerel	12,950	1,295	6,250	710		
Spot	6,285	115	650	32		
Squeteague, gray	482,035	12,541	220,550	6,705		
Squeteague, speckled	9,050	1,735	65,210	8,805		
Striped bass	16,750	2,528	2,020	311	150	27
White perch	600	18	575	58	250	25
Yellow perch	4,000	120	635	40	250	20
Other fish					50	8
Total	1,047,220	62,966	433,367	32,025	106,975	1,486

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY POUND NETS—Continued

Species	Tyrrell		Washington		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh			7,900	$99	1,233,805	$26,862
Alewives, salted	240,000	$3,600	90,000	1,275	3,326,550	55,122
Black bass	1,550	279	600	108	3,850	644
Bluefish					24,817	1,131
Bonito					6,270	125
Butterfish					239,740	11,975
Carp, German	250	7	375	10	8,180	477
Catfish	13,500	540	7,250	242	65,566	2,276
Cod					158	5
Croaker					184,768	5,341
Drum, red, or redfish					23,185	945
Eels	2,000	200	675	71	10,649	1,127
Flounders					141,022	8,560
Harvestfish or "starfish"					450,556	18,918
Hickory shad	3,100	310	400	32	168,694	12,900
King whiting					27,586	951
Mullet					577	48
Pigfish					2,100	36
Pike	1,000	230	350	88	1,575	362
Pinfish or sailor's choice					1,200	30
Pompano					10,857	934
Shad	6,600	1,485	26,451	5,640	1,110,678	270,421
Sheepshead					2,350	114
Spanish mackerel					77,086	7,442
Spot					148,434	5,224
Squeteague, gray					1,693,301	59,483
Squeteague, speckled					88,507	12,634
Striped bass	2,000	360	1,625	293	110,607	16,748
Sturgeon					3,464	556
Sturgeon caviar					160	400
Sunfish					1,435	75
Trippletail					181	9
White perch	28,150	3,378	15,000	1,650	87,278	9,374
Yellow perch	2,200	220	740	63	17,412	1,187
Other fish					2,871	148
Turtles					4,086	83
Total	300,350	10,609	151,366	9,571	9,279,555	532,667

BY FYKE NETS

Species	Camden		Currituck		Gates		Pasquotank		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives, fresh	500	$10	1,600	$35					2,100	$45
Black bass	250	40	2,050	344	1,600	$288	3,636	$509	7,536	1,181
Bowfin	800	16	1,950	39	2,000	160	976	19	5,726	234
Carp, German	3,000	180	22,500	1,350			1,554	70	27,054	1,600
Catfish	500	20	3,750	150	10,800	324	23,214	813	38,264	1,307
Flounders							630	43	630	40
Mullet							601	48	601	48
Pike							1,750	131	1,750	131
Striped bass	500	100	3,100	620					3,600	720
Suckers							69	3	69	3
Sunfish	1,000	20	5,200	104			1,008	121	7,208	245
White perch	500	38	4,000	293	12,600	1,260	7,606	685	24,706	2,276
Yellow perch	9,000	675	76,000	5,575	3,600	288	2,277	182	90,877	6,720
Total	16,050	1,099	120.150	8,510	30,600	2,320	43,321	2,624	210,121	14,553

BY LINES

Species	Carteret		Dare		Hyde		New Hanover		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Angel fish	100	$5							100	$5
Bluefish	500	60							500	60
Drum, red, or redfish							12,000	$600	12,000	600
Flounders	200	10							200	10
Grunt	300	9							300	9
Pigfish	200	6							200	6
Pinfish or sailor's choice	400	14							400	14
Red snapper	500	35							500	35
Sea bass	35,000	2,800							35,000	2,800
Squeteague, gray	1,000	100			1,000	$50			2,000	150
Squeteague, speckled	500	75							500	75
Crabs, hard			304,750	$4,895					304,750	4,895
Crabs, soft			300	19					300	19
Total	38,700	3,114	305,050	4,914	1,000	50	12,000	600	356,750	8,678

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY OTTER TRAWLS

Species	Brunswick		Carteret		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Croaker	2,365	$70			2,365	$70
Flounders	14,500	475	500	$40	15,000	515
King whiting	7,800	245			7,800	245
Spot	3,165	106			3,165	106
Squeteague, gray	900	27			900	27
Shrimp	1,307,160	39,211	133,784	4,076	1,440,944	43,287
Total	1,335,890	40,134	134,284	4,116	1,470,174	44,250

BY EELPOTS AND SPEARS

Counties	Eelpots		Spears	
	Eels		Flounders	
	Pounds	*Value*	*Pounds*	*Value*
Beaufort	13,000	$2,600		
Camden	1,000	100		
Carteret	15,535	2,325	35,000	$1,750
Currituck	95,192	7,980		
Dare	23,000	990		
Hyde	250	13	2,000	100
New Hanover			23,000	3,450
Pamlico	10,325	1,326		
Pasquotank	2,100	235		
Pender			13,000	1,980
Total	160,402	15,569	73,000	7,280

BY DREDGES

Counties	Oyster dredges		Scallop dredges	
	Oysters, market, public		Scallops	
	Pounds	*Value*	*Pounds*	*Value*
Beaufort	56,700	$5,250		
Carteret	12,950	1,203	439,128	$36,594
Dare	7,000	500		
Hyde	117,600	8,400		
Pamlico	292,250	16,675		
Total	486,500	32,028	439,128	36,594

BY TONGS, RAKES, AND HAND

Apparatus and species	Brunswick		Carteret		Dare		Hyde	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Tongs:								
Clams, hard	30,400	$7,600	600	$150	344	$97		
Oysters, market, public			383,600	22,101	14,637	1,242	316,442	$15,063
Oysters, market, private			1,750	125				
Total	30,400	7,600	385,950	22,376	14,981	1,339	316,442	15,063
Rakes:								
Clams, hard	71,200	17,800	79,728	18,860			3,200	600
Crabs, soft			1,332	200				
Oysters, market, public			5,180	444	14,651	1,243		
Scallops			112,698	9,391				
Total	71,200	17,800	198,938	28,895	14,651	1,243	3,200	600
Hand:								
Clams, hard	2,400	600	34,864	7,282				
Oysters, market, public	25,900	925	263,578	11,782				
Total	28,300	1,525	298,442	19,064				

Yield of shore fisheries of North Carolina in 1923, by apparatus, counties, and species—Continued

BY TONGS, RAKES, AND HAND—Continued

Apparatus and species	New Hanover		Onslow		Pamlico		Pender		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Tongs:										
Clams, hard							2,800	$700	34,144	$8,547
Oysters, market, public			58,415	$6,021	54,950	$3,110	21,000	1,000	849,044	48,537
Oysters, market, private					7,000	500			8,750	625
Total			58,415	6,021	61,950	3,610	23,800	1,700	891,938	57,709
Rakes:										
Clams, hard	18,000	$5,375					7,200	1,800	179,328	44,435
Crabs, soft									1,332	200
Oysters, market, public									19,831	1,687
Scallops									112,698	9,391
Total	18,000	5,375					7,200	1,800	313,189	55,713
Hand:										
Clams, hard			12,800	3,200					50,064	11,082
Oysters, market, public	28,000	1,400					8,400	400	325,878	14,507
Total	28,000	1,400	12,800	3,200			8,400	400	375,942	25,589

BY OTHER APPARATUS

Species	Carteret		Dare		Martin		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Alewives					54,000	$648	54,000	$648
Carp					200	6	200	6
Catfish					300	5	300	5
White perch					600	54	600	54
Crabs, soft	84,121	$12,592					84,121	12,592
Shrimp	3,335	100					3,335	100
Scallops	2,748	229					2,748	229
Turtles			360	$120			360	120
Terrapin			5,000	500			5,000	500
Total	90,204	12,921	5,360	620	55,100	713	150,664	14,254

INDUSTRIES

Wholesale trade.—The wholesale trade in fresh fish, oysters, etc., in North Carolina in 1923 was conducted by 54 firms, having an investment of $301,192. The number of persons employed was 475 and the wages paid amounted to $112,646. In the salt-fish trade there were 22 establishments with an investment of $282,428. There were 194 persons employed and the wages paid amounted to $82,459. The products salted included alewives, 8,200 pounds, valued at $202; mullet, 531,000 pounds, valued at $56,895; and spot, 271,000 pounds, valued at $21,775; a total of 810,200 pounds, valued at $78,872. Most of these firms engaged in the fresh-fish trade also.

Oyster-canning industry.—There were six establishments, valued at $144,440, engaged in canning oysters, having a working capital of $20,500 and employing 300 persons, to whom $50,548 were paid in wages. The products included 37,857 cases of canned oysters, valued at $190,613, and 4,400 tons of lime made from oyster shells, valued at $23,750.

Statistics of these industries are given in detail in the following tables:

Wholesale fresh-fish trade of North Carolina in 1923

Items	Number	Value
Establishments	54	$213,092
Cash capital		88,100
Persons engaged	475	
Wages paid		112,646

Salt-fish trade of North Carolina in 1923

Items	Number	Value
Establishments	22	$241,428
Cash capital		41,000
Persons engaged	194	
Wages paid		82,459
PRODUCTS SALTED		
Alewives	8,200	202
Mullet	531,000	56,895
Spot	271,000	21,775
Total	810,200	78,872

NOTE.—Most of the above firms also handled fresh fish.

Oyster canning and by-products industries of North Carolina in 1923

Items	Number	Value
Establishments	6	$144,440
Cash capital		20,500
Persons engaged	300	
Wages paid		50,548
PRODUCTS		
Oysters, canned:		
4-ounce (4 dozen) cases	667	3,337
5-ounce (4 dozen) do	33,222	167,958
10-ounce (2 dozen) do	3,968	19,318
Total	37,857	190,613
BY-PRODUCTS		
Lime tons	4,400	23,750

NOTE.—The poultry grit output of two firms is included under South Carolina. The statistics for one firm canning shrimp are included under the east coast of Florida. In addition to the canned products and by-products above, there were produced canned alewives and porpoise oil having a combined value of $11,119.

FISHERIES OF SOUTH CAROLINA

The fisheries of South Carolina are less extensive than those of the other South Atlantic States. In 1923 the number of persons engaged was 2,164, of whom 1,052 were fishermen in the vessel and shore fisheries, 94 were on transporting vessels, and 1,018 were engaged in fishery industries, including the wholesale fishery trade and canning industry.

The investment in the fisheries was $606,781, which included 50 fishing and transporting vessels of 597 net tons, valued at $73,300, with outfits valued at $8,200; 750 boats, valued at $38,025; fishing apparatus used on vessels and boats to the value of $24,872; shore and accessory property valued at $366,884; and cash or working capital amounting to $95,500.

The total yield of the fisheries in 1923 was 6,763,279 pounds, valued at $284,791. The most important species taken, arranged in order of value, were oysters, 5,032,342 pounds or 718,906 bushels valued at $113,955; shad, 183,916 pounds, valued at $43,721; mullet, 152,500 pounds fresh and 253,000 pounds salted, valued together at $35,200; sea bass, 218,000 pounds, valued at $20,300; and sturgeon, including sturgeon caviar, 49,981 pounds, valued at $16,708.

Compared with 1918 there was an increase of 164, or 8.20 per cent, in the number of persons engaged; $385,530, or 174.25 per cent, in the investment; and 3,016,347 pounds, or 80.50 per cent, in the quantity and $77,101, or 37.12 per cent, in the value of the products. There was an increase in the oyster production of 321,216 bushels, or 81 per cent, and $17,413, or 18 per cent, in value. There was also an increase in the catch of shad, mullet, sea bass, and various other species. In the catch of sturgeon and a few other species there was a decrease.

The following tables give, by counties, the number of persons engaged, investment, and products of the fisheries of South Carolina in 1923:

Persons engaged in the fisheries of South Carolina in 1923, by counties

Counties	On vessels fishing	On vessels transporting	In shore fisheries	Shoremen	Total
Beaufort		84	225	622	931
Charleston	8	10	283	331	632
Colleton			72		72
Georgetown			284	60	344
Horry			180	5	185
Total	8	94	1,044	1,018	2,164

Investment in the fisheries of South Carolina, in 1923, by counties

Items	Beaufort		Charleston		Colleton		Georgetown		Horry		Total	
	No.	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*
Vessels, fishing:												
Gasoline			1	$3,500							1	$3,500
Tonnage			11								11	
Outfit				2,000								2,000
Vessels, transporting:												
Gasoline	9	$37,500	6	10,200							15	47,700
Tonnage	156		68								224	
Outfit		2,700		550								3,250
Sail	34	22,100									34	22,100
Tonnage	362										362	
Outfit		2,950										2,950
Power boats	2	1,000	16	4,750			38	$16,300	2	$275	58	22,325
Sailboats			10	1,000			8	800			18	1,800
Rowboats	243	4,960	181	2,365	49	$1,110	147	4,075	54	1,390	674	13,900
Apparatus, vessel fisheries:												
Lines				100								100
Apparatus, shore fisheries:												
Haul seines							3	350	13	1,345	16	1,695
Gill nets	30	700	40	2,500	52	2,690	144	14,070	15	1,500	281	21,460
Stop nets									7	210	7	210
Lines				150								150
Spears							30	25	25	22	55	47
Otter trawls	1	50					7	300			8	350
Tongs	20	120	6	30			20	100			46	250
Rakes			3	3			56	45	25	22	84	70
Grabs	248	310	132	165	25	40	20	25			425	540
Shore and accessory property		149,898		195,159				20,177		1,650		366,884
Cash capital		52,000		38,000				4,500		1,000		95,500
Total		274,288		260,472		3,840		60,767		7,414		606,781

Yield of the fisheries of South Carolina in 1923, by counties and species

Species	Beaufort		Charleston		Colleton	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Catfish			2,000	$60		
Crevalle			7,000	350		
Croaker			20,000	1,000		
Drum, black			10,000	300		
Drum, red, or redfish			17,000	850		
Flounders			1,000	50		
Groupers			8,000	480		
King whiting			60,000	6,000		
Red snapper			2,000	200		
Scup or porgy			7,500	525		
Sea bass			218,000	20,300		
Shad	23,450	$6,900	27,440	5,880	34,867	$7,584
Sharks			18,000	360		
Sheepshead			1,000	80		
Skates			3,000	60		
Spot, fresh			500	30		
Squeteague or "sea trout"			60,000	6,000		
Sturgeon			3,213	1,125		
Sturgeon caviar			30	90		
Crabs, hard			9,000	270		
Shrimp	20,000	700				
Clams, hard			776	125		
Oysters, market, public	3,080,875	71,405	1,305,157	23,967	89,194	1,912
Oysters, market, private	67,116	2,921	343,000	10,750	35,000	750
Total	3,191,441	81,926	2,123,616	78,852	159,061	10,246

Species	Georgetown		Horry		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Bluefish	2,000	$300	5,000	$400	7,000	$700
Catfish	500	19			2,500	79
Crevalle					7,000	350
Croaker	4,200	166	1,800	108	26,000	1,274
Drum, black	3,050	92			13,050	392
Drum, red, or redfish	8,000	400	6,000	480	31,000	1,730
Flounders	6,600	510	20,050	1,604	27,650	2,164
Groupers					8,000	480
Hickory shad	7,500	750			7,500	750
King whiting	2,300	135	21,100	1,688	83,400	7,823
Mullet, fresh	20,000	1,000	132,500	10,600	152,500	11,600
Mullet, salted	85,000	6,800	168,000	16,800	253,000	23,600
Red snapper					2,000	200
Scup or porgy			1,000	80	8,500	605
Sea bass					218,000	20,300
Shad	82,619	19,997	15,540	3,360	183,916	43,721
Sharks					18,000	360
Sheepshead					1,000	80
Skates					3,000	60
Spot, fresh	21,000	1,050	35,000	2,800	56,500	3,880
Spot, salted	10,000	600	40,000	4,000	50,000	4,600
Squeteague or "sea trout"	6,500	650	3,800	304	70,300	6,954
Sturgeon	46,193	13,858			49,406	14,983
Sturgeon caviar	545	1,635			575	1,725
Sunfish			1,500	120	1,500	120
Crabs, hard					[1] 9,000	270
Shrimp	335,000	11,725			355,000	12,425
Clams, hard	64,360	6,923	20,504	2,563	[2] 85,640	9,611
Oysters, market, public	105,000	1,500	7,000	750	[3] 4,587,226	99,534
Oysters, market, private					[4] 445,116	14,421
Total	810,367	68,110	478,794	45,657	6,763,279	284,791

[1] 27,000 in number. [2] 10,705 bushels. [3] 655,318 bushels. [4] 63,588 bushels.

FISHERIES BY APPARATUS

In South Carolina in 1923 there was only one vessel engaged in fishing. The entire catch, consisting of groupers, red snappers, and sea bass, was taken with lines and amounted to 160,000 pounds, valued at $14,180. In the shore or boat fisheries a number of forms of fishing apparatus were used, the most productive of which were grabs, taking 4,884,362 pounds or 697,766 bushels, of oysters, valued at $101,134. The catch with haul seines, consisting chiefly of mullet and spot, amounted to 443,900 pounds, valued at $39,011. The catch with gill nets, consisting chiefly of shad, mullet, and sturgeon,

amounted to 351,897 pounds, valued at $68,774. Lines, which were used only in Charleston County, took 284,000 pounds of various species, valued at $22,735. The principal species taken with this apparatus were king whiting, sea bass, and squeteague or "sea trout." The catch of shrimp, amounting to 355,000 pounds, valued at $12,425, was taken with otter trawls. The catch with tongs included oysters, 140,980 pounds or 20,140 bushels, valued at $12,071; and hard clams 22,448 pounds or 2,806 bushels, valued at $1,684. Hard clams taken with rakes amounted to 63,192 pounds or 7,899 bushels, valued at $7,927. Oysters taken by hand without apparatus amounted to 7,000 pounds or 1,000 bushels, valued at $750. The catch with stop nets, consisting of mullet and spot, amounted to 19,000 pounds, valued at $1,580, and the catch with gigs or spears, consisting of redfish or red drum, flounders, and squeteague or "sea trout," amounted to 31,500 pounds, valued at $2,520.

The products of the vessel and shore or boat fisheries by counties, apparatus, and species are given in the following tables:

Yield of the vessel fisheries of South Carolina in 1923, by counties, apparatus, and species

Apparatus and species	Charleston	
Lines:	*Pounds*	*Value*
Groupers	8,000	$480
Red snappers	2,000	200
Sea bass	150,000	13,500
Total	160,000	14,180

Yield of the shore fisheries of South Carolina in 1923, by counties, apparatus, and species

Items	Beaufort		Charleston		Colleton	
Gill nets:	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Shad	23,450	$6,900	27,440	$5,880	34,867	$7,584
Sturgeon			3,213	1,125		
Sturgeon caviar			30	90		
Total	23,450	6,900	30,683	7,095	34,867	7,584
Lines:						
Catfish			2,000	60		
Croaker			20,000	1,000		
Cravalle			7,000	350		
Drum, black			10,000	300		
Drum, red, or redfish			17,000	850		
Flounders			1,000	50		
King whiting			60,000	6,000		
Scup or porgy			7,500	525		
Sea bass			68,000	6,800		
Sheepshead			1,000	80		
Sharks			18,000	360		
Skates			3,000	60		
Spot			500	30		
Squeteague or "sea trout"			60,000	6,000		
Crabs, hard			9,000	270		
Total			284,000	22,735		
Otter trawls: Shrimp	20,000	700				
Tongs:						
Oysters, market, public	83,321	5,952				
Oysters, market, private	29,659	2,119	28,000	4,000		
Total	112,980	8,071	28,000	4,000		
Grabs:						
Oysters, market, public	2,997,554	65,453	1,305,157	23,967	89,194	1,912
Oysters, market, private	37,457	802	315,000	6,750	35,000	750
Total	3,035,011	66,255	1,620,157	30,717	124,194	2,662
Rakes: Clams, hard			776	125		
Grand total	3,191,441	81,926	1,963,616	64,672	159,061	10,246

Yield of the shore fisheries of South Carolina in 1923, by counties, apparatus, and species—Continued

Items	Georgetown		Horry		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Haul seines:						
Bluefish			5,000	$400	5,000	$400
Catfish	300	$9			300	9
Croaker	200	6	1,800	108	2,000	114
Drum, black	50	2			50	2
Drum, red, or redfish			1,000	80	1,000	80
Flounders	300	15	50	4	350	19
King whiting	300	15	21,100	1,688	21,400	1,703
Mullet, fresh	5,000	250	117,500	9,400	122,500	9,650
Mullet, salted	30,000	2,400	165,000	16,500	195,000	18,900
Scup or porgy			1,000	80	1,000	80
Spot, fresh	6,000	300	34,000	2,720	40,000	3,020
Spot, salted	10,000	600	40,000	4,000	50,000	4,600
Sunfish			1,500	120	1,500	120
Squeteague or "sea trout"	500	50	3,300	264	3,800	314
Total	52,650	3,647	391,250	35,364	443,900	39,011
Gill nets:						
Bluefish	2,000	300			2,000	300
Catfish	200	10			200	10
Croaker	4,000	160			4,000	160
Drum, black	3,000	90			3,000	90
Drum, red, or redfish	8,000	400			8,000	400
Flounders	300	15			300	15
Hickory shad	7,500	750			7,500	750
King whiting	2,000	120			2,000	120
Mullet, fresh	15,000	750			15,000	750
Mullet, salted	55,000	4,400			55,000	4,400
Shad	82,619	19,997	15,540	$3,360	183,916	43,721
Spot	15,000	750			15,000	750
Sturgeon	46,193	13,858			49,406	14,983
Sturgeon caviar	545	1,635			575	1,725
Squeteague or "sea trout"	6,000	600			6,000	600
Total	247,357	43,835	15,540	3,360	351,897	68,774
Stop nets:						
Mullet, fresh			15,000	1,200	15,000	1,200
Mullet, salted			3,000	300	3,000	300
Spot			1,000	80	1,000	80
Total			19,000	1,580	19,000	1,580
Lines:						
Catfish					2,000	60
Croaker					20,000	1,000
Crevalle					7,000	350
Drum, black					10,000	300
Drum, red, or redfish					17,000	850
Flounders					1,000	50
King whiting					60,000	6,000
Scup or porgy					7,500	525
Sea bass					68,000	6,800
Sheepshead					1,000	80
Sharks					18,000	360
Skates					3,000	60
Spot					500	30
Squeteague or "sea trout"					60,000	6,000
Crabs, hard					9,000	270
Total					284,000	22,735
Gigs or spears:						
Drum, red, or redfish			5,000	400	5,000	400
Flounders	6,000	480	20,000	1,600	26,000	2,080
Squeteague or "sea trout"			500	40	500	40
Total	6,000	480	25,500	2,040	31,500	2,520
Otter trawls: Shrimp	335,000	11,725			355,000	12,425
Tongs:						
Clams, hard	22,448	1,684			22,448	1,684
Oysters, market, public					83,321	5,952
Oysters, market, private					57,659	6,119
Total	22,448	1,684			163,428	13,755

Yield of the shore fisheries of South Carolina in 1923, by counties, apparatus, and species—Continued

Items	Georgetown		Horry		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Grabs:						
Oysters, market, public	105,000	$1,500			4,496,905	$92,832
Oysters, market, private					387,457	8,302
Total	105,000	1,500			4,884,362	101,134
Rakes: Clams, hard	41,912	5,239	20,504	$2,563	63,192	7,927
By hand: Oysters, market, public			7,000	750	7,000	750
Grand total	810,367	68,110	478,794	45,657	6,603,279	270,611

INDUSTRIES

Wholesale trade.—In the wholesale fish trade in 1923 there were 7 establishments, valued at $55,162, with cash capital amounting to $8,500, employing 43 persons, to whom $35,073 were paid in wages. These firms handled fresh fish, oysters, and hard clams.

Oyster-canning industry.—There were 14 establishments engaged in canning oysters and in utilizing oyster shells, valued at $309,922, with cash capital amounting to $77,100, and employing 973 persons, to whom $135,522 were paid in wages. The pack of canned oysters amounted to 103,956 cases, or 4,546,800 cans of various sizes, valued at $510,829. In addition to this pack there were prepared from osyter shells, including the product of three plants in other States, 8,586 tons of poultry grit, valued at $82,048, and 1,324 tons of lime, valued at $9,775. The following tables give statistics of the wholesale trade and oyster-canning industry of South Carolina in 1923.

Wholesale fishery trade of South Carolina in 1923

Items	Number	Value
Establishments	7	$55,162
Cash capital		8,500
Persons engaged	43	
Wages paid		35,073

Oyster canning and by-products industries of South Carolina in 1923

Items	Number	Value
Establishments	14	$309,922
Cash capital		77,100
Persons engaged	973	
Wages paid		135,522
PRODUCTS		
Oysters canned:		
3-ounce (4 dozen) cases	591	2,945
4-ounce (4 dozen) do	12,412	58,156
5-ounce (4 dozen) do	72,387	365,300
6-ounce (4 dozen) do	104	1,040
8-ounce (2 dozen) do	2,195	10,293
10-ounce (2 dozen)	16,267	73,095
Total	103,956	510,829
BY-PRODUCTS		
Poultry grit tons	[1] 8,586	82,048
Lime do	[2] 1,324	9,775
Total	9,910	91,823
Grand total		602,652

[1] Includes poultry grit from oyster shells, made by one firm in Georgia and two firms in North Carolina.
[2] Includes lime from oyster shells made by one firm on the east coast of Florida.

NOTE.—The statistics for one firm canning shrimp are included under the east coast of Florida.

FISHERIES OF GEORGIA

The fisheries of Georgia in 1923 gave employment to 2,019 persons, of whom 186 were on vessels fishing, 29 on vessels transporting fishery products, 620 in the shore or boat fisheries, and 1,184 were shoremen in the wholesale fishery trade and oyster and shrimp canning industries.

The investment amounted to $1,378,704, which includes 42 fishing vessels and transporting vessels, valued at $202,275, with a net tonnage of 679 and outfits valued at $36,443; 492 power and other boats, valued at $137,765; fishing apparatus employed on vessels and boats valued at $19,832; shore and accessory property valued at $859,889; and cash capital amounting to $122,500.

The products amounted to 39,896,386 pounds, valued at $668,129. The most important species, arranged in the order of their value, were shrimp, 10,668,380 pounds, valued at $373,303; menhaden, 26,973,000 pounds, valued at $149,850; oysters, 1,720,334 pounds or 245,762 bushels, valued at $86,771; shad, 133,750 pounds, valued at $27,890; sea bass, 104,090 pounds, valued at $8,327; red snapper, 104,970 pounds, valued at $7,347; and hard crabs, 120,000 pounds, valued at $7,000.

Compared with 1918 there was an increase of 339, or 20.18 per cent, in the number of persons engaged in the fisheries and fishery industries; $608,706, or 79.05 per cent, in the investment; and 2,742,433 pounds, or 7.38 per cent, in the quantity and $252,086, or 60.59 per cent, in the value of the products. There was an increase in the catch of shrimp of 4,874,915 pounds and $199,313 in value and a considerable increase in the catch of shad and oysters. The catch of menhaden decreased 2,511,600 pounds in quantity but increased $61,397 in value. There was a decrease in the catch of red snapper and sea bass but a large increase in the catch of hard crabs.

The following tables give, by counties, the number of persons employed, investment, and the quantity and value of the products of the fisheries in 1923:

Persons engaged in the fisheries of Georgia in 1923, by counties

Counties	On vessels fishing	On vessels transporting	In shore fisheries	Shoremen	Total
Bryan			36		36
Camden	122		36	91	249
Chatham	42	16	207	175	440
Effingham			16		16
Glynn	22	7	190	545	764
Liberty		2	36	46	84
Long			2		2
McIntosh		4	83	327	414
Wayne			14		14
Total	186	29	620	1,184	2,019

Investment in the fisheries of Georgia in 1923, by counties

Items	Bryan		Camden		Chatham		Effingham		Glynn	
	No.	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*
Vessels, fishing:										
Gasoline			5	$122,000	8	$33,440			11	$26,635
Tonnage			201		185				83	
Outfit				19,918		11,270				3,575
Vessels transporting:										
Gasoline					1	1,000			6	5,100
Tonnage					5				53	
Outfit						75				650
Sail					8	8,500				
Tonnage					111					
Outfit						455				
Power boats			13	13,000	11	2,700			85	85,000
Rowboats	18	$360	10	200	173	3,440	8	$160	24	550
Apparatus, vessel fisheries:										
Purse seines			4	7,200						
Lines						300				
Otter trawls			1	50	4	180			11	550
Dredges					2	100				
Apparatus, shore fisheries:										
Gill nets	18	540	10	300	46	1,400	8	240	20	600
Otter trawls			13	650					85	4,250
Grabs					104	131			4	4
Tongs					104	520				
Lines						40				
Shore and accessory property				78,000		518,229				160,109
Cash capital				15,000		37,000				40,000
Total		900		256,318		618,780		400		327,023

Items	Liberty		Long		McIntosh		Wayne		Total	
	No.	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*
Vessels fishing:										
Gasoline									24	$182,075
Tonnage									469	
Outfit										34,763
Vessels transporting:										
Gasoline	1	$2,000			2	$3,600			10	11,700
Tonnage	20				21				99	
Outfit		200				300				1,225
Sail									8	8,500
Tonnage									111	
Outfit										455
Power boats	9	5,700			27	23,900			145	130,300
Rowboats	36	1,040	1	$20	68	1,515	9	$180	347	7,465
Apparatus, vessel fisheries:										
Purse seines									4	7,200
Lines										300
Otter trawls									16	780
Dredges									2	100
Apparatus, shore fisheries:										
Gill nets			6	30	19	1,180	19	270	146	4,560
Otter trawls					20	1,000			118	5,900
Grabs	36	45			39	66			183	246
Tongs	24	144			6	42			134	706
Lines										40
Shore and accessory property		10,400				93,151				859,889
Cash capital		4,000				26,500				122,500
Total		23,529		50		151,254		450		1,378,704

Yield of the fisheries of Georgia in 1923, by counties and species

Species	Bryan		Camden		Chatham		Effingham		Glynn	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Drum, red, or redfish									600	$36
Flounders									200	12
Groupers					11,413	$571				
Grunts					123	10				
Jewfish					2,767	111				
King whiting									1,000	100
Menhaden			26,973,000	$149,850						
Mullet									4,000	240
Pinfish or sailor's choice					400	24				
Red snapper					104,970	7,347				
Scup or porgy					1,601	182				
Sea bass					104,090	8,327				
Shad	35,640	$7,560	7,000	600	65,230	14,260	15,840	$3,360	3,300	700
Spot									600	36
Squeteague or "sea trout"									5,000	500
Striped bass					360	29				
Crabs, hard					120,000	7,000				
Shrimp			560,000	19,600	135,000	4,725			7,982,380	279,293
Oysters, market, public					712,775	50,913			49,595	1,063
Oysters, market, private					139,125	8,336			3,500	250
Octopus					50	10				
Terrapin					1,200	1,000				
Total	35,640	7,560	27,540,000	170,050	1,399,104	102,845	15,840	3,360	8,050,175	282,230

Species	Liberty		Long		McIntosh		Wayne		Total	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Drum, red, or redfish									600	$36
Flounders									200	12
Groupers									11,413	571
Grunts									123	10
Hickory shad			1,000	$100	5,660	$576	3,850	$390	10,510	1,066
Jewfish									2,767	111
King whiting									1,000	100
Menhaden									26,973,000	149,850
Mullet									4,000	240
Pinfish or sailor's choice									400	24
Red snapper									104,970	7,347
Scup or porgy									1,601	182
Sea bass									104,090	8,327
Shad			330	70	4,100	850	2,310	490	133,750	27,890
Spot									600	36
Squeteague, or "sea trout"									5,000	500
Striped bass									360	29
Sturgeon					32,000	3,600			32,000	3,600
Sturgeon caviar					38	114			38	114
Crabs, hard									[1] 120,000	7,000
Shrimp					1,991,000	69,685			10,668,380	373,303
Oysters, market, public	45,731	$1,960			140,686	3,444			[2] 948,787	57,380
Oysters, market, private	284,522	10,025			344,400	10,780			[3] 771,547	29,391
Octopus									50	10
Terrapin									1,200	1,000
Total	330,253	11,985	1,330	170	2,517,884	89,049	6,160	880	39,896,386	668,129

[1] 360,000 in number. [2] 135,541 bushels. [3] 110,221 bushels.

FISHERIES BY APPARATUS

The yield of all forms of apparatus employed in the vessel fisheries of Georgia in 1923 amounted to 28,233,374 pounds, valued at $203,602. The catch by purse seines, consisting entirely of menhaden, amounted to 26,973,000 pounds, valued at $149,850. The catch with lines, consisting of various species, the more important of which were red snapper and sea bass, amounted to 225,774 pounds, valued at $16,611. Otter trawls were used in taking shrimp, the catch amounting to 1,006,600 pounds, valued at $35,141. The catch with dredges consisted of 28,000 pounds, or 4,000 bushels, of oysters, valued at $2,000.

In the shore or boat fisheries the catch amounted to 11,663,012 pounds, valued at $464,527. The apparatus used included gill nets, grabs, tongs, otter trawls, and lines. The catch with gill nets, consisting of a number of species and including as its most important item the entire catch of shad, amounted to 188,298 pounds, valued at $34,094. The catch with grabs consisted of 824,670 pounds, or 117,810 bushels, of oysters, valued at $38,918, and with tongs, 776,545 pounds, or 110,935 bushels, valued at $43,865. Otter trawls took 9,661,780 pounds of shrimp, valued at $338,162. The entire catch of shrimp in both the vessel and shore fisheries was taken with this apparatus, but no other species was taken. Lines were used in taking hard crabs, the catch amounting to 120,000 pounds, valued at $7,000, which was the total catch of this species for the State. There were taken by hand, without apparatus, 91,119 pounds, or 13,017 bushels, of oysters, valued at $1,988, and 600 pounds of terrapin, valued at $500.

The products taken with the various forms of fishing apparatus employed in the vessel and shore or boat fisheries are given by counties and species in the appended tables:

Yield of the vessel fisheries of Georgia in 1923, by apparatus, species, and counties

Apparatus and species	Camden		Chatham		Glynn		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines: Menhaden	26,973,000	$149,850					26,973,000	$149,850
Lines:								
Groupers			11,413	$571			11,413	571
Grunts			123	10			123	10
Jewfish			2,767	111			2,767	111
Pinfish or sailor's choice			400	24			400	24
Red snapper			104,970	7,347			104,970	7,347
Scup or porgy			1,601	182			1,601	182
Sea bass			104,090	8,327			104,090	8,327
Striped bass			360	29			360	29
Octopus			50	10			50	10
Total			225,774	16,611			225,774	16,611
Otter trawls: Shrimp	100,000	3,500	135,000	4,725	771,600	$26,916	1,006,600	35,141
Dredges: Oysters, market, private			28,000	2,000			28,000	2,000
Grand total	27,073,000	153,350	388,774	23,336	771,600	26,916	28,233,374	203,602

Yield of the shore fisheries of Georgia in 1923, by apparatus, species, and counties

Apparatus and species	Bryan		Camden		Chatham		Effingham		Glynn	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Gill nets:										
Drum, red, or redfish									600	$36
Flounders									200	12
King whiting									1,000	100
Mullet									4,000	240
Shad	35,640	$7,560	7,000	$600	65,230	$14,260	15,840	$3,360	3,300	700
Spot									600	36
Squeteague or "sea trout"									5,000	500
Terrapin					600	500				
Total	35,640	7,560	7,000	600	65,830	14,760	15,840	3,360	14,700	1,624
Grabs:										
Oysters, market, public					285,110	20,365			39,676	850
Oysters, market, private					39,375	2,212			2,800	200
Total					324,485	22,577			42,476	1,050

Yield of the shore fisheries of Georgia in 1923, by apparatus, species, and counties—Continued

Apparatus and species	Bryan		Camden		Chatham		Effingham		Glynn	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Tongs:										
Oysters, market, public					427,665	$30,548				
Oysters, market, private					71,750	4,124				
Total					499,415	34,672				
Otter trawls: Shrimp			460,000	$16,100					7,210,780	$252,377
Lines: Crabs, hard					120,000	7,000				
By hand:										
Oysters, market, public									9,919	213
Oysters, market, private									700	50
Terrapin					600	500				
Total					600	500			10,619	263
Grand total	35,640	$7,560	467,000	16,700	1,010,330	79,509	15,840	$3,360	7,278,575	255,314

Apparatus and species	Liberty		Long		McIntosh		Wayne		Total	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Gill nets:										
Drum, red, or redfish									600	$36
Flounders									200	12
Hickory shad			1,000	$100	5,660	$576	3,850	$390	10,510	1,066
King whiting									1,000	100
Mullet									4,000	240
Shad			330	70	4,100	850	2,310	490	133,750	27,890
Spot									600	36
Squeteague or "sea trout"									5,000	500
Sturgeon					32,000	3,600			32,000	3,600
Sturgeon caviar					38	114			38	114
Terrapin									600	500
Total			1,330	170	41,798	5,140	6,160	880	188,298	34,094
Grabs:										
Oysters, market, public	22,862	$980			60,186	1,719			407,834	23,914
Oysters, market, private	142,261	5,012			232,400	7,580			416,836	15,004
Total	165,123	5,992			292,586	9,299			824,670	38,918
Tongs:										
Oysters, market, public	22,869	980							450,534	31,528
Oysters, market, private	142,261	5,013			112,000	3,200			326,011	12,337
Total	165,130	5,993			112,000	3,200			776,545	43,865
Otter trawls: Shrimp					1,991,000	69,685			9,661,780	338,162
Lines: Crabs, hard									120,000	7,000
By hand:										
Oysters, market, public					80,500	1,725			90,419	1,938
Oysters, market, private									700	50
Terrapin									600	500
Total					80,500	1,725			91,719	2,488
Grand total	330,253	11,985	1,330	170	2,517,884	89,049	6,160	880	11,663,012	464,527

INDUSTRIES

Wholesale trade.—In 1923 there were 13 establishments in the wholesale fresh-fish trade in Georgia, valued at $175,701, with cash capital amounting to $37,000 and employing 179 persons, to whom $85,462 were paid in wages. These firms handled fresh fish, oysters, and shrimp.

Canning industry.—There were 13 establishments, including 2 firms on the east coast of Florida, in the canning industry, valued at $294,578. The cash capital used amounted to $83,000. There

were 1,050 persons employed, to whom $150,859 were paid in wages. These firms were engaged in canning oysters, shrimp, and other fishery products and also in the preparation of poultry grit from oyster shells, which is included in the statistics for South Carolina. The canned products included 24,449 cases, or 1,154,736 cans, of canned oysters, valued at $126,877, and 93,019 cases, or 4,315,488 cans, valued at $554,660. Other canned fishery products were valued at $3,200. Statistics of the wholesale fresh fish trade and canning industry in 1923 are given in the following tables:

Wholesale fishery trade of Georgia in 1923

Items	Number	Value
Establishments	13	$175,701
Cash capital		37,000
Persons engaged	179	
Wages paid		85,462

NOTE.—The statistics for Georgia's one menhaden plant are included under the general tables for the South Atlantic States, and the output of its one shell plant is included under South Carolina.

Oyster and shrimp canning industry of Georgia in 1923 [1]

Items	Number	Value
Establishments	13	$294,578
Cash capital		83,000
Persons engaged	1,050	
Wages paid		150,859
Total		528,437
PRODUCTS		
Oysters canned:		
5-ounce (4 dozen) cases	23,665	123,051
8-ounce (2 dozen) do	278	1,251
10-ounce (2 dozen) do	506	2,575
Total	24,449	126,877
Shrimp canned:		
No. 1 (4 dozen) cases	86,793	518,563
No. 1½ (2 dozen) do	6,226	36,097
Total	93,019	554,660
Grand total	117,468	681,537

[1] Includes two firms in Florida (east coast).

NOTE.—In addition to canned shrimp and oysters there were produced $3,200 worth of miscellaneous canned fishery products.

FISHERIES OF EAST COAST OF FLORIDA

The statistics here presented are for the east coast of Florida, which among the South Atlantic States was surpassed in the extent of its fisheries only by North Carolina. The number of persons engaged in the fisheries in 1923 was 2,807, of whom 237 were on fishing and transporting vessels, 1,810 were in the shore or boat fisheries, and 760 in the wholesale fish trade, menhaden industry, and canning industry.

The investment amounted to $2,320,880 and includes 14 fishing and transporting vessels, valued at $226,400, with a net tonnage of 594 tons and outfits valued at $46,033; 1,306 power and row boats, valued at $532,550; fishing apparatus used on vessels and boats, valued at $131,614; shore and accessory property to the value of $1,106,083; and cash capital amounting to $278,200.

The products amounted to 86,895,922 pounds, valued at $1,719,921. The principal species taken, arranged in the order of their value, were shrimp, 11,024,045 pounds, valued at $385,361; menhaden, 57,918,030 pounds, valued at $276,209; mullet, 6,198,200 pounds, valued $194,092; Spanish mackerel 2,469,400 pounds, valued at $187,247; cero and kingfish, 1,965,457 pounds, valued at $161,077; bluefish, 1,100,550 pounds, valued at $147,321; squeteague or "sea trout," 1,198,400 pounds, valued at $122,854; shad, 502,866 pounds, valued at $62,447; catfish, 783,440 pounds, valued at $38,372; alewives, 1,048,000 pounds, valued at $26,700; sunfish, 476,809 pounds, valued at $19,672; oysters, 502,264 pounds, or 71,752 bushels, valued at $17,835; and sea crawfish or spiny lobster, 156,200 pounds, valued at $11,634.

Compared with 1918, there was a decrease of 523, or 15.71 per cent, in the number of persons engaged but an increase of $110,201, or 4.98 per cent, in the investment. There was an increase of 5,684,434 pounds, or 7 per cent, in the quantity, with a decrease of $26,254, or 1.5 per cent, in the value of the products. There was an increase in the catch of alewives, bluefish, blue runner or hardtail, catfish, menhaden, squeteague or "sea trout," shrimp, crabs, sea crawfish or spiny lobster, oysters, and various other species. There was a decrease in a number of species, the more important of which were mullet, pinfish or sailor's choice, pompano, sergeant fish or snook, shad, Spanish mackerel, and spot.

Statistics of the number of persons engaged, investment, and products of the fisheries of the east coast of Florida in 1923, by counties, are given in the following table:

Persons engaged in the fisheries of the east coast of Florida in 1923

Counties	On vessels fishing	On vessels transporting	In shore fisheries	Shoresmen	Total
Brevard			149	18	167
Broward			10		10
Clay			17		17
Dade	8		104	13	125
Duval	99		156	90	345
Lake			12		12
Nassau	124	4	433	534	1,095
Palm Beach			377	47	424
Putnam			164	3	167
St. John		2	51	31	84
St. Lucie			212	24	236
Seminole			65		65
Volusia			60		60
Total	231	6	1,810	760	2,807

Investment in the fisheries of the east coast of Florida in 1923, by counties

Items	Brevard		Broward		Clay		Dade		Duvall		Lake		Nassau	
	No.	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*
Vessels fishing:														
Steam									1	$30,600			3	$124,700
Tonnage									64				289	
Outfit										10,000				16,683
Gasoline							1	$1,500	2	26,200			4	39,300
Tonnage							9		93				106	
Outfit								250		14,000				4,550
Vessels transporting:														
Gasoline													2	1,600
Tonnage													24	
Outfit														450
Power boats	68	$21,500	3	$1,000	4	$800	39	20,650	71	28,450	2	$400	207	292,800
Rowboats	139	4,020	1	75	13	330			35	1,050	6	165	36	850
Apparatus, vessel fisheries:														
Purse seines							1	1,000	3	2,100			4	7,200
Otter trawls													3	150
Apparatus, shore fisheries:														
Purse seines							4	6,000						
Haul seines			1	400	4	750			10	420	6	1,300		
Gill nets	141	16,950	2	300			20	2,500	72	10,200			10	300
Lines				30		90		700		120				
Otter trawls									10	400			204	11,000
Crab traps									30	75				
Dip nets							31	62						
Grabs													4	4
Shore and accessory property		43,200				40		19,000		418,369		2,000		363,686
Cash capital		9,000						7,500		109,500				98,000
Total		94,670		1,805		2,010		59,162		651,484		3,865		961,273

Items	Palm Beach		Putnam		Seminole		St. John		St. Lucie		Volusia		Total	
	No.	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*	*No.*	*Value*
Vessels fishing:														
Steam													4	$155,300
Tonnage													353	
Outfit														26,683
Gasoline													7	67,000
Tonnage													208	
Outfit														18,800
Vessels transporting:														
Gasoline							1	$2,500					3	4,100
Tonnage							9						33	
Outfit								100						550
Power boats	202	$73,250	34	$7,850	14	$2,650	27	14,250	105	$50,000	16	$4,050	792	517,650
Rowboats	11	1,090	105	2,675	44	1,125	26	650	30	1,000	68	1,870	514	14,900
Apparatus, vessel fisheries:														
Purse seines													8	10,300
Otter trawls													3	150
Apparatus, shore fisheries:														
Purse seines	1	1,500											5	7,500
Haul seines	3	1,800	27	6,100	27	4,350	5	590	1	400	1	50	85	16,160
Gill nets	126	20,325	29	2,750			2	100	125	21,250	41	5,800	568	80,475
Lines		2,675						100		860		20		4,595
Cast nets							6	30					6	30
Spears							3	3					3	3
Otter trawls							12	600					226	12,000
Crab traps													30	75
Dip nets													31	62
Tongs	1	7					12	90	5	35	17	119	35	251
Rakes							12	9					12	9
Grabs													4	4
Shore and accessory property		111,300		15,723		2,025		43,392		82,248		5,100		1,106,083
Cash capital		28,200		2,000				2,500		21,500				278,200
Total		240,147		37,098		10,150		64,914		177,293		17,009		2,320,880

Yield of the fisheries of the east coast of Florida in 1923 by counties and species

Species	Brevard		Broward		Clay		Dade		Duval	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Angel fish							100	$4		
Barracuda							500	20		
Black bass					2,400	$360				
Bluefish			6,200	$930			23,100	915	1,150	$103
Blue runner or hardtail			6,000	300			600	48		
Catfish					100,000	5,000				
Cero and kingfish			15,000	1,200			258,857	25,885		
Crappie					2,200	154				
Crevalle	400	$12					500	20	300	15
Croaker	500	20								
Drum, black	11,600	348							2,100	105
Drum, red, or redfish	20,400	612	300	21					2,750	195
Flounders	500	17							200	12
Groupers							6,000	360		
Grunts							300	24		
Hogfish							350	28		
King whiting	14,800	1,160							13,600	960
Menhaden									24,639,030	109,643
Mullet	3,148,200	107,382	20,000	600			810,000	15,700	26,000	1,350
Permit			500	15						
Pigfish	5,800	174								
Pinfish or sailor's choice	26,200	786					100	5		
Pompano	200	40					200	40	150	38
Scup or porgy							1,000	80		
Sea bass			150	12					1,000	70
Shad									134,750	17,150
Sheepshead	5,200	156								
Snapper, mangrove							2,000	200		
Snapper, mutton	2,100	63					5,600	560		
Snapper, red							3,000	300	800	56
Snook or sergeant fish	500	15								
Spanish mackerel			12,000	1,200			29,000	3,045		
Spot	18,400	552							600	45
Squeteague or "sea trout"	436,000	47,410							29,500	3,540
Sunfish					28,000	1,680				
Yellowtail or "silver perch"							400	32		
Crabs, hard									72,000	3,600
Sea crawfish or spiny lobster							156,200	11,634		
Shrimp									150,000	5,250
Total	3,690,800	158,747	60,150	4,278	132,600	7,194	1,297,807	58,900	25,073,930	142,132

Species	Lake		Nassau		Palm Beach		Putnam		St. Johns	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Alewives, fresh	260,000	$6,500					760,000	$19,000		
Alewives, salted							28,000	1,200		
Amberfish					3,900	$122				
Angel fish					2,300	72				
Barracuda					1,600	48				
Black bass	20,200	2,020					30,100	3,040		
Bluefish					658,700	98,295			600	$60
Blue runner or hardtail					125,000	2,650				
Bonito					350	12				
Catfish	92,000	4,700					350,000	16,600		
Cero and kingfish					1,587,000	126,670				
Crappie	10,800	548					34,000	1,910		
Crevalle					73,200	2,206			200	6
Croaker					11,650	351			900	45
Drum, black					1,200	38			3,000	100
Drum, red, or redfish					4,600	204			8,000	420
Flounders					400	23			1,750	105
Groupers					8,800	444				
Grunts					2,850	136			100	3
Hogfish					200	6				
Jewfish					250	7				
King whiting			100,000	$2,000	9,500	424			1,600	140
Leatherjacket or "turbot"					400	16				
Menhaden			33,279,000	166,566						
Moonfish					1,400	45				
Mullet					355,400	11,512	24,000	1,000	11,000	610
Permit					1,600	56				
Pigfish					300	16			250	11
Pinfish or sailor's choice					3,530	107			700	33
Pompano					29,700	2,628			1,000	200
Porkfish					2,000	60				
Scup or porgy					1,000	30				

Yield of the fisheries of the east coast of Florida in 1923 by counties and species—Continued

Species	Lake		Nassau		Palm Beach		Putnam		St. Johns	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Sea bass					725	$44			500	$30
Shad	27,000	$3,397	7,000	$600			272,800	$33,256		
Sheepshead					15,950	772			350	21
Snapper, mangrove					9,900	328				
Snapper, mutton					76,000	2,440				
Snapper, red					4,000	230				
Snook or sergeant fish					45,100	1,362				
Spanish mackerel					1,163,400	92,642				
Spot					3,500	188			3,000	150
Squeteague or "sea trout"			10,000	300	97,500	9,750			23,500	2,350
Sunfish	81,000	3,240					299,000	12,000		
Yellowtail or "silver perch"					22,650	697				
Shrimp			10,424,045	364,341					450,000	15,770
Clams, hard									4,560	1,665
Oysters, market, public			224,000	4,200	1,050	120			126,000	3,750
Oysters, market, private			5,250	885					16,800	1,800
Total	491,000	20,405	44,049,295	538,892	4,326,605	354,751	1,797,900	88,006	653,810	27,269

Species	St. Lucie		Seminole		Volusia		Total	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Alewives, fresh							1,020,000	$25,500
Alewives, salted							28,000	1,200
Amberfish	200	$6					4,100	128
Angel fish	800	42					3,200	118
Barracuda	600	18					2,700	86
Black bass			29,593	$2,959			82,293	8,379
Bluefish	409,800	46,868			1,000	$150	1,100,550	147,321
Blue runner or hardtail	47,800	1,246					179,400	4,244
Bonito							350	12
Catfish			241,440	12,072			783,440	38,372
Cero and kingfish	104,600	7,322					1,965,457	161,077
Crappie			18,403	920			65,403	3,532
Crevalle	89,000	2,730			1,000	60	164,600	5,049
Croaker	8,200	246			300	12	21,550	674
Drum, black	22,400	676			6,400	252	46,700	1,519
Drum, red, or redfish	78,200	2,614			7,600	368	121,850	4,434
Flounders	1,600	278			1,400	54	5,850	489
Groupers	2,400	96					17,200	900
Grunts	4,400	144					7,650	307
Hogfish	1,000	30					1,550	64
Jewfish							250	7
King whiting	22,200	948			13,600	1,180	175,300	6,812
Leatherjacket or "turbot"							400	16
Menhaden							57,918,030	276,209
Moonfish	800	24					2,200	69
Mullet	1,361,600	41,868			442,000	14,070	6,198,200	194,092
Permit	3,600	108					5,700	179
Pigfish	800	24			7,000	210	14,150	435
Pinfish or sailor's choice	17,600	540			3,000	90	51,130	1,561
Pompano	23,400	4,680			6,000	1,300	60,650	8,926
Porkfish							2,000	60
Scup or porgy							2,000	110
Sea bass	1,800	108					4,175	264
Shad			61,316	8,044			502,866	62,447
Sheepshead	9,000	326			1,600	54	32,100	1,329
Snapper, mangrove	14,600	476					26,500	1,004
Snapper, mutton	39,400	1,242					123,100	4,305
Snapper, red	3,800	190					11,600	776
Snook or sergeant fish	93,800	2,887			300	9	139,700	4,273
Spanish mackerel	1,265,000	90,360					2,469,400	187,247
Spot	32,000	1,390			14,200	552	71,700	2,877
Squeteague or "sea trout"	504,500	50,970			97,400	8,534	1,198,400	122,854
Sunfish			68,809	2,752			476,809	19,672
Yellowtail or "silver perch"	5,600	168					28,650	897
Crabs, hard							[1] 72,000	3,600
Sea crawfish or spiny lobster							156,200	11,634
Shrimp							11,024,045	385,361
Clams, hard							[2] 4,560	1,665
Oysters, market, public	17,500	2,000			97,664	4,405	[3] 466,214	14,475
Oysters, market, private					14,000	675	[4] 36,050	3,360
Total	4,188,000	260,625	419,561	26,747	714,464	31,975	86,895,922	1,719,921

[1] 216,000 in number. [2] 570 bushels. [3] 66,602 bushels. [4] 5,150 bushels.

FISHERIES BY APPARATUS

The total catch taken by vessels in the fisheries of the east coast of Florida in 1923 amounted to 58,118,030 pounds, valued at $280,709, the species taken being menhaden, mullet, and shrimp. The only forms of fishing apparatus used on vessels were purse seines and otter trawls. The catch with purse seines included 57,918,030 pounds of menhaden, valued at $276,209, which was the entire catch of this species. There were also taken with this apparatus 100,000 pounds of mullet, valued at $1,500. The catch with otter trawls consisted of 100,000 pounds of shrimp, valued at $3,000.

In the shore or boat fisheries the catch amounted to 28,777,892 pounds, valued at $1,439,212. The forms of fishing apparatus used include purse seines, haul seines, gill nets, lines, otter trawls, cast nets, spears, crab traps, dip nets, tongs, rakes, and grabs. Gill nets were the most productive form of apparatus used, the catch amounting to 11,038,780 pounds, valued at $675,056. The principal species taken with gill nets were mullet, 5,381,200 pounds, valued at $175,562; Spanish mackerel, 2,418,500 pounds, valued at $183,110; squeteagues or "sea trout," 1,056,900 pounds, valued at $108,834; bluefish, 980,800 pounds, valued at $133,240; and shad 278,750 pounds, valued at $38,935. The catch with otter trawls, which was next in importance, amounted to 11,034,045 pounds, valued at $384,661, and included 10,924,045 pounds of shrimp, valued at $382,361; 100,000 pounds of king whiting, valued at $2,000; and 10,000 pounds of squeteague or "sea trout," valued at $300. The entire catch of shrimp was taken with this form of apparatus. The catch with seines amounted to 3,565,611 pounds, valued at $148,551. Purse seines took 684,000 pounds, valued at $16,050, including 660,000 pounds of mullet, valued at $14,850, and 24,000 pounds of bluefish, valued at $1,200.

The catch with haul seines amounted to 2,881,611 pounds, valued at $132,501. The principal species taken were alewives, 1,048,000 pounds, valued at $26,700; catfish, 743,440 pounds, valued at $36,372; shad, 224,116 pounds, valued at $23,512; and sunfish, 476,809 pounds, valued at $19,672. The catch with lines amounted to 2,434,782 pounds, valued at $197,663. Among the more important species taken with lines were bluefish, 76,200 pounds, valued at $10,544; catfish, 40,000 pounds, valued at $2,000; cero and kingfish, 1,962,457 pounds, valued at $160,777; snook or sergeant fish, 36,900 pounds, valued at $1,116; Spanish mackerel, 32,900 pounds, valued at $2,457; squeteague or "sea trout," 118,000 pounds, valued at $12,110; and hard crabs, 40,000 pounds, valued at $2,000. The catch of mullet and various other species with cast nets amounted to 8,150 pounds, valued at $457. There were taken with spears 1,500 pounds of flounders, valued at $90. Crab traps were used in taking hard crabs, the catch amounting to 32,000 pounds, valued at $1,600. The total catch of sea crawfish or spiny lobster, amounting to 156,200 pounds, valued at $11,634, was taken with dip nets. The forms of apparatus used in taking oysters and hard clams were tongs, rakes, and grabs. The catch of hard clams with tongs amounted to 3,040 pounds, or 380 bushels, valued at $1,110; and with rakes 1,520 pounds, or 190 bushels, valued at $555. The catch of oysters with tongs amounted to 155,414 pounds, or 22,202 bushels,

valued at $9,900; with rakes to 12,600 pounds, or 1,800 bushels, valued at $1,350; and with grabs to 14,000 pounds, or 2,000 bushels, valued at $1,490. There were also taken by hand, without apparatus, 320,250 pounds of oysters, or 45,750 bushels, valued at $5,095. The products of the vessel and shore fisheries of the east coast of Florida taken by each form of fishing apparatus in 1923 are given by counties and species in the following tables:

Yield of vessel fisheries of the east coast of Florida in 1923, by counties, apparatus, and species

Apparatus and species	Dade		Duvall		Nassau		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:								
Menhaden			24,639,030	$109,643	33,279,000	$166,566	57,918,030	$276,209
Mullet	100,000	$1,500					100,000	1,500
Total	100,000	1,500	24,639,030	109,643	33,279,000	166,566	58,018,030	277,709
Otter trawls: Shrimp					100,000	3,000	100,000	3,000
Grand total	100,000	1,500	24,639,030	109,643	33,379,000	169,566	58,118,030	280,709

Yield of the shore fisheries of the east coast of Florida in 1923, by counties, apparatus, and species

BY SEINES

Apparatus and species	Broward		Clay		Dade		Duvall	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:								
Bluefish					20,000	$600		
Mullet					550,000	11,000		
Total					570,000	11,600		
Haul seines:								
Black bass			2,400	$360				
Bluefish	1,200	$180					150	$23
Catfish			60,000	3,000				
Crappie			2,200	154				
Crevalle							300	15
Drum, black							600	30
Drum, red, or red fish							1,250	90
Flounders							200	12
King whiting							5,600	480
Mullet	15,000	450					2,000	150
Pompano							150	38
Spot							600	45
Squeteague or "sea trout"							5,500	660
Sunfish			28,000	1,680				
Total	16,200	630	92,600	5,194			16,350	1,543
Grand total	16,200	630	92,600	5,194	570,000	11,600	16,350	1,543

Yield of the shore fisheries of the east coast of Florida in 1923, by counties, apparatus, and species—Continued

BY SEINES—Continued

Apparatus and species	Lake		Palm Beach		Putnam		Seminole	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:								
Bluefish			4,000	$600				
Mullet			110,000	3,850				
Total			114,000	4,450				
Haul seines:								
Alewives, fresh	260,000	$6,500			760,000	$19,000		
Alewives, salted					28,000	1,200		
Black bass	20,200	2,020			30,100	3,040	29,593	$2,959
Bluefish			14,000	1,600				
Blue runner or hardtail			2,000	100				
Bonito			100	4				
Catfish	92,000	4,700			350,000	16,600	241,440	12,072
Cero and kingfish			3,000	300				
Crappie	10,800	548			34,000	1,910	18,403	920
Crevalle			8,000	240				
King whiting			200	10				
Mullet			25,000	750	4,000	200		
Permit			100	5				
Pinfish or sailor's choice			3,000	90				
Pompano			2,000	400				
Shad	27,000	3,397			135,800	12,071	61,316	8,044
Snapper, mutton			60,000	1,800				
Spanish mackerel			18,000	1,680				
Sunfish	81,000	3,240			299,000	12,000	68,809	2,752
Total	491,000	20,405	135,400	6,979	1,640,900	66,021	419,561	26,747
Grand total	491,000	20,405	249,400	11,429	1,640,900	66,021	419,561	26,747

Apparatus and species	St. John		St. Lucie		Volusia		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Purse seines:								
Bluefish							24,000	1,200
Mullet							660,000	14,850
Total							684,000	16,050
Haul seines:								
Alewives, fresh							1,020,000	25,500
Alewives, salted							28,000	1,200
Barracuda			200	$6			200	6
Black bass							82,293	8,379
Bluefish			3,200	384	1,000	$150	19,550	2,337
Blue runner or hardtail			5,000	150			7,000	250
Bonito							100	4
Catfish							743,440	36,372
Cero and kingfish							3,000	300
Crappie							65,403	3,532
Crevalle			8,000	240	1,000	60	17,300	555
Croaker	400	$20	1,000	30			1,400	50
Drum, black	1,000	30	2,000	60	2,000	120	5,600	240
Drum, red, or redfish	5,000	250			4,000	240	10,250	580
Flounders							200	12
Grunts			800	24			800	24
King whiting	1,000	80	4,000	120	5,000	400	15,800	1,090
Moonfish			400	12			400	12
Mullet			1,000	30	4,000	240	51,000	1,820
Permit			400	12			500	17
Pigfish	100	5	400	12			500	17
Pinfish or sailor's choice	500	25					3,500	115
Pompano	1,000	200	2,000	400	2,000	500	7,150	1,538
Sea bass			800	48			800	48
Shad							224,116	23,512
Sheepshead	200	12					200	12
Snapper, mutton							60,000	1,800
Snook or sergeant fish			1,000	30			1,000	30
Spanish mackerel							18,000	1,680
Spot	2,000	100			200	12	2,800	157
Squeteague or "sea trout"	5,000	500			3,000	450	13,500	1,610
Sunfish							476,809	19,672
Yellowtail			1,000	30			1,000	30
Total	16,200	1,222	31,200	1,588	22,200	2,172	2,881,611	132,501
Grand total	16,200	1,222	31,200	1,588	22,200	2,172	3,565,611	148,551

Yield of the shore fisheries of the east coast of Florida in 1923, by counties, apparatus, and species—Continued

BY GILL NETS

Apparatus and species	Brevard		Broward		Dade		Duval	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Bluefish			5,000	$750	3,000	$300		
Blue runner or hardtail			6,000	300				
Crevalle	400	$12						
Croaker	500	20						
Drum, black	11,600	348						
Drum, red, or redfish	20,400	612	300	21				
Flounders	500	17						
King whiting	14,800	1,160						
Mullet	3,148,200	107,382	5,000	150	160,000	3,200	24,000	$1,200
Permit			500	15				
Pigfish	5,800	174						
Pinfish or sailor's choice	26,200	786						
Pompano	200	40						
Sea bass			150	12				
Shad							134,750	17,150
Sheepshead	5,200	156						
Snapper, mutton	2,100	63						
Snook, or sergeant fish	500	15						
Spanish mackerel			12,000	1,200	27,500	2,820		
Spot	18,400	552						
Squeteague or "sea trout"	436,000	47,410						
Total	3,690,800	158,747	28,950	2,448	190,500	6,320	158,750	18,350

Apparatus and species	Nassau		Palm Beach		Putnam		St. Johns	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Angel fish			300	$12				
Bluefish			592,400	88,850				
Blue runner or hardtail			123,000	2,550				
Crevalle			49,200	1,486			200	$6
Croaker			11,650	351				
Drum, black			800	26			500	15
Drum, red, or redfish			2,100	46			1,000	50
Flounders			300	18				
Grunts			600	32				
King whiting			8,900	402			600	60
Moonfish			1,400	45				
Mullet			220,400	6,912	20,000	$800	5,000	250
Permit			1,500	51				
Pigfish			300	16			50	3
Pinfish or sailor's choice			530	17			100	5
Pompano			27,700	2,228				
Porkfish			2,000	60				
Scup or porgy			1,000	30				
Sea bass			300	16				
Shad	7,000	$600			137,000	21,185		
Sheepshead			10,800	504			100	6
Snapper, mangrove			6,600	206				
Snapper, mutton			12,600	428				
Snook or sergeant fish			12,400	372				
Spanish mackerel			1,140,000	90,550				
Spot			3,500	188			600	30
Squeteague or "sea trout"			68,500	6,850			3,000	300
Yellowtail or "silver perch"			22,650	697				
Total	7,000	600	2,321,430	202,943	157,000	21,985	11,150	725

Yield of the shore fisheries of the east coast of Florida in 1923, by counties, apparatus, and species—Continued

BY GILL NETS—Continued

Apparatus and species	St. Lucie		Volusia		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Amberfish	200	$6			200	$6
Angel fish	800	42			1,100	54
Barracuda	400	12			400	12
Bluefish	380,400	43,340			980,800	133,240
Blue runner or hardtail	42,800	1,096			171,800	3,946
Crevalle	76,200	2,346			126,000	3,850
Croaker	7,200	216	300	$12	19,650	599
Drum, black	20,400	616	4,400	132	37,700	1,137
Drum, red, or redfish	68,000	2,206	3,000	110	94,800	3,045
Flounders	1,400	270	1,400	54	3,600	359
Grunts	3,600	120			4,200	152
Hogfish	1,000	30			1,000	30
King whiting	17,200	798	8,600	780	50,100	3,200
Moonfish	400	12			1,800	57
Mullet	1,360,600	41,838	438,000	13,830	5,381,200	175,562
Permit	3,200	96			5,200	162
Pigfish	400	12	7,000	210	13,550	415
Pinfish or sailor's choice	17,600	540	3,000	90	47,430	1,438
Pompano	19,400	3,880	4,000	800	51,300	6,948
Porkfish					2,000	60
Scup or porgy					1,000	30
Sea bass	1,000	60			1,450	88
Shad					278,750	38,935
Sheepshead	6,800	260	1,600	54	24,500	980
Snapper, mangrove	7,600	266			14,200	472
Snapper, mutton	37,400	1,182			52,100	1,673
Snook or sergeant fish	88,660	2,731	300	9	101,800	3,127
Spanish mackerel	1,239,000	88,540			2,418,500	183,110
Spot	32,000	1,390	14,000	540	68,500	2,700
Squeteague or "sea trout"	467,000	47,160	82,400	7,114	1,056,900	108,834
Yellowtail or "silver perch"	4,600	138			27,250	835
Total	3,905,200	239,203	568,000	23,735	11,038,780	675,056

BY LINES

Apparatus and species	Broward		Clay		Dade		Duval		Palm Beach	
	Lbs.	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*	*Lbs.*	*Value*
Amberfish									3,900	$122
Angelfish					100	$4			2,000	60
Barracuda					500	20			1,600	48
Bluefish					100	15	1,000	$80	48,300	7,245
Blue runner or hardtail					600	48				
Bonito									250	8
Catfish			40,000	$2,000						
Cero and kingfish	15,000	$1,200			258,857	25,885			1,584,000	126,370
Crevalle					500	20			16,000	480
Drum, black							1,500	75	400	12
Drum, red, or redfish							1,500	105	2,500	158
Flounders									100	5
Groupers					6,000	360			8,800	444
Grunts					300	24			2,250	104
Hogfish					350	28			200	6
Jewfish									250	7
King whiting							8,000	480	400	12
Leatherjacket or "turbot"									400	16
Pinfish or sailor's choice					100	5				
Pompano					200	40				
Scup or porgy					1,000	80				
Sea bass							1,000	70	425	28
Sheepshead									5,150	268
Snapper, mangrove					2,000	200			3,300	122
Snapper, mutton					5,600	560			3,400	212
Snapper, red					3,000	300	800	56	4,000	230
Snook or sergeant fish									32,700	990
Spanish mackerel					1,500	225			5,400	412
Squeteague or "sea trout"							24,000	2,880	29,000	2,900
Yellowtail or "silver perch"					400	32				
Crabs, hard							40,000	2,000		
Total	15,000	1,200	40,000	2,000	281,107	27,846	77,800	5,746	1,754,725	140,259

Yield of the shore fisheries of the east coast of Florida in 1923, by counties, apparatus, and species—Continued

BY LINES—Continued

Apparatus and species	St. Johns		St. Lucie		Volusia		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Amberfish							3,900	$122
Angelfish							2,100	64
Barracuda							2,100	68
Bluefish	600	$60	26,200	$3,144			76,200	10,544
Blue runner or hardtail							600	48
Bonito							250	8
Catfish							40,000	2,000
Cero and kingfish			104,600	7,322			1,962,457	160,777
Crevalle			4,800	144			21,300	644
Drum, black	500	15					2,400	102
Drum, red, or redfish	2,000	120	10,200	408	600	$18	16,800	809
Flounders	150	9	200	8			450	22
Groupers			2,400	96			17,200	900
Grunts	100	3					2,650	131
Hogfish							550	34
Jewfish							250	7
King whiting			1,000	30			9,400	522
Leatherjacket or "turbot"							400	16
Pigfish	100	3					100	3
Pinfish or sailor's choice							100	5
Pompano			2,000	400			2,200	440
Scup or porgy							1,000	80
Sea bass	500	30					1,925	128
Sheepshead			2,200	66			7,350	334
Snapper, mangrove			7,000	210			12,300	532
Snapper, mutton			2,000	60			11,000	832
Snapper, red			3,800	190			11,600	776
Snook or sergeant fish			4,200	126			36,900	1,116
Spanish mackerel			26,000	1,820			32,900	2,457
Squeteague or "sea trout"	15,500	1,550	37,500	3,810	12,000	970	118,000	12,110
Yellowtail or "silver perch"							400	32
Crabs, hard							40,000	2,000
Total	19,450	1,790	234,100	17,834	12,600	988	2,434,782	197,663

BY CAST NETS, SPEARS, AND OTTER TRAWLS

Apparatus and species	Duval		Nassau		St. Johns		Total	
Cast nets:	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Croaker					500	$25	500	$25
Drum, black					1,000	40	1,000	40
Flounders					100	6	100	6
Mullet					6,000	360	6,000	360
Pinfish or sailor's choice					100	3	100	3
Sheepshead					50	3	50	3
Spot					400	20	400	20
Total					8,150	457	8,150	457
Spears: Flounders					1,500	90	1,500	90
Otter trawls:								
King whiting			100,000	$2,000			100,000	2,000
Squeteague or "sea trout"			10,000	300			10,000	300
Shrimp	150,000	$5,250	10,324,045	361,341	450,000	15,770	10,924,045	382,361
Total	150,000	5,250	10,434,045	363,641	450,000	15,770	11,034,045	384,661

BY CRAB TRAPS AND DIP NETS

Apparatus and species	Dade		Duval		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Crab traps: Crabs, hard			32,000	$1,600	32,000	$1,600
Dip nets: Sea crawfish or spiny lobsters	156,200	$11,634			156,200	11,634

Yield of the shore fisheries of the east coast of Florida in 1923, by counties, apparatus, and species—Continued

BY TONGS, RAKES, GRABS, AND HAND

Apparatus and species	Nassau		Palm Beach		St. Johns	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Tongs:						
Clams, hard					3,040	$1,110
Oysters, market, public			1,050	$120	14,000	1,500
Oysters, market, private					11,200	1,200
Total			1,050	120	28,240	3,810
Rakes:						
Clams, hard					1,520	553
Oysters, market, public					7,000	750
Oysters, market, private					5,600	600
Total					14,120	1,905
Grabs:						
Oysters, market, public	10,500	$900				
Oysters, market, private	3,500	590				
Total	14,000	1,490				
By hand:						
Oysters, market, public	213,500	3,300			105,000	1,5000
Oysters, market, private	1,750	295				
Total	215,250	3,595			105,000	1,500

Apparatus and species	St Lucie		Volusia		Total	
	Pounds	*Value*	*Pounds*	*Value*	*Pounds*	*Value*
Tongs:						
Clams, hard					3,040	$1,110
Oysters, market, public	17,500	$2,000	97,664	$4,405	130,214	8,025
Oysters, market, private			14,000	675	25,200	1,875
Total	17,500	2,000	111,664	5,080	158,454	11,010
Rakes:						
Clams, hard					1,520	555
Oysters, market, public					7,000	750
Oysters, market, private					5,600	600
Total					14,120	1,905
Grabs:						
Oysters, market, public					10,500	900
Oysters, market, private					3,500	590
Total					14,000	1,490
By hand:						
Oysters, market, public					318,500	4,800
Oysters, market, private					1,750	295
Total					320,250	5,095

INDUSTRIES

Wholesale trade.—There were 50 establishments on the east coast of Florida in 1923 engaged in the wholesale trade in fishery products, valued at $524,475. The cash capital amounted to $115,700. There were 321 persons employed, to whom $172,064 were paid in wages.

Canning industry.—In the shrimp-canning industry in 1923 there were 7 establishments, including 1 in North Carolina and 1 in South Carolina, valued at $210,970. The cash capital amounted to $40,000, and 501 persons were employed, to whom $114,909 were paid in wages. The pack of canned shrimp in these canneries amounted to 53,857 cases, or 2,074,392 cans of various sizes, valued at $302,199. By-products to the value of $10,600 were also prepared

from shrimp on the east coast of Florida. Two oyster canneries on the east coast of Florida are included in the statistics for Georgia, and the lime from oyster shells at one plant with the statistics for South Carolina.

The following tables give statistics of the wholesale fish trade and shrimp-canning industry:

Wholesale fishery trade of the east coast of Florida in 1923

Items	Number	Value
Establishments	50	$524,475
Cash capital		115,700
Persons engaged	321	
Wages paid		172,064

Shrimp-canning industry of the east coast of Florida in 1923 [1]

Items	Number	Value
Establishments	7	$210,970
Cash capital		40,000
Persons engaged	501	
Wages paid		114,909
PRODUCTS		
Shrimp canned:		
No. 1 (4 dozen) cases	32,576	198,025
No. 1½ (2 dozen) do	4,370	24,692
5½-ounce (2 dozen) do	16,911	79,482
Total	53,857	302,199

[1] Includes one firm in North Carolina and one firm in South Carolina.

NOTE.—In addition to canned shrimp on the east coast of Florida there were $10,600 worth of by-products from shrimp. Two firms canning oysters on the east coast of Florida are included under Georgia, and the output of lime from one shell plant is included under South Carolina. The statistics for its two menhaden plants are included under the general tables for the South Atlantic States.